FORTRAN MAN

The cartoon series Fortran Man was published in the People‘s Computer Company (PPC) Journals from November 1976 to August 1980.
It makes fun of the computer jargon of the era, heavily influenced by IBM mainframes and the various programming languages. Some of the puns may go unnoticed by todays computer users.

I have extracted the relevant pages and combined them here for easier reading.
More details can be found on the next page.

Martin Hepperle, 2022

https://www.vintagecomputer.net/browse_thread.cfm?id=102 Bill Degnan - 09/27/2015 13:08

Lee Schneider, the original author of Fortran Man contacted me to set the record straight about "Billy BASIC" - NOT being Bill Gates. I am very thankful to have heard from Lee, His comments follow:

".. Saw your notes on PCC magazine from the '70s and feel obligated to correct the history a bit -- Fortran Man was created as a pastime doodle while studying for my tech degree, and was sent to Bob Albrecht as a bonus along with an article on the Kingdom game (expanded from the original DECUS version) he had asked us for. There was never any "political commentary" intended (nor did I even know who Bill Gates was at the time).

I know this because I am the original author of both Kingdom and the Fortran Man comics. Todd & I are still alive and well and computerizing in Milwaukee.

The objective of Fortran Man was to include as many bad hardware & software puns as possible into each frame. My sketches were originally created while sitting in the back row of boring lectures at MATC (Milwaukee Area Technical College, where I was getting my Computer Tech degree before transferring to UWM Engineering) -- since all of our software homework was done in Fortran (thru an IBM 1130) the name "Fortran Man" was obvious, and being a Batman fan I knew he needed a sidekick to explain things to, so I went with the other up-and-coming language of the time, Basic (and in true Stan Lee fashion, initials had to match, ala Peter Parker, et al).

At the same time Todd was going for his Software Engineering degree at Marquette University, within walking distance of MATC, so we would often meet up for lunch and I would give him copies of the latest F-Man to post on the MU Computer Center bulletin board (we had initially met at the M.U. Science Fair in 1969 while still in High School).

BTW: the game "Kingdom" was based on a DEC demo game called Hamurabi, which I expanded on and added a number of features, but the goal remained the same -- resource management of land, grain & peasants until you acquire enough to "rule the world". After our DECUS article we ended up sending copies to requestees all over the country, Canada, and at least one place in Scotland. One copy went to a Navy Lieutenant in the Pentagon, who wrote us back that once on their system he couldn't get any work done over lunchtime because all the Army brass was sitting at the terminals playing and griping about how they couldn't call in an air strike when the Huns attacked their border. Kingdom also had the distinction of being the first program banned by the Marquette Computer IBM360 timesharing center, because students playing it were hogging computer time and nobody could get their homework done (they later relented and allowed it to be played, but only after 10pm). Remember, this was 1971 -- the infancy of computer gaming.

Also BTW: I still have several ADDS terminals in my basement.

Feel free to pass along this info wherever -- but realize I am typically too busy for long correspondences these days (am currently visiting friends in San Jose, before heading down to San Bernardino to supervise install of some equipment).

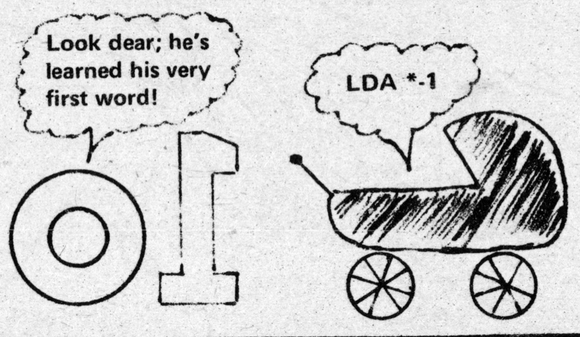
Final BTW: if you want to see one of the strangest use of embedded computer power ever, take a look at www.pevnickdesign.com .."

FORTRAN MAN

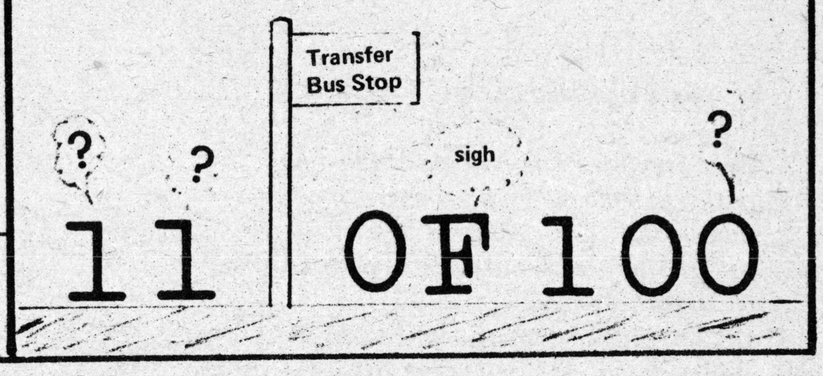
Lee Schneider

Todd Voros

As you know, our hero, Fortran Man, was born in a small system in New York, to normal, hard-working second-generation parents . . .



Even as a child, he stood out in a crowd . . .



But soon, it became apparent to the world that he had powers above and beyond that of the common compiler, impressing everyone with his speed, his mathematical ability, and his scientific powers!

Disguised as a mild mannered disk file, he keeps an ever vigilant watch on software in many places, always ready to spring forth to fight for Truth, Justice and the Algorithmic way!

Faster than a speeding Do Loop!
More powerful than a Two-Pass Assembler!
Able to leap tall matrices in a single Dimension!

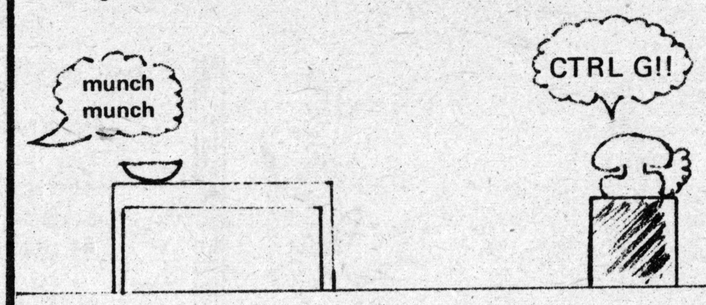
It's a PC Board!
It's a core plane!

No, it's FORTRAN MAN

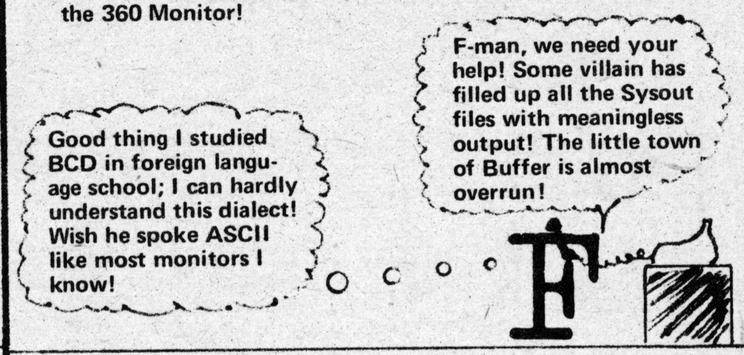


As our story opens, we find our hero living in a resident-core district of a large metropolis called 360 City.

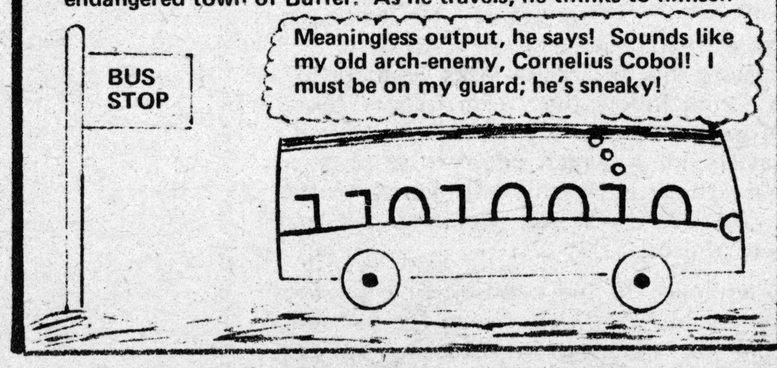
As he finishes his usual breakfast (a bowl of Parity Chex and a glass of Card Punch) he hears his hot-line ring . . .



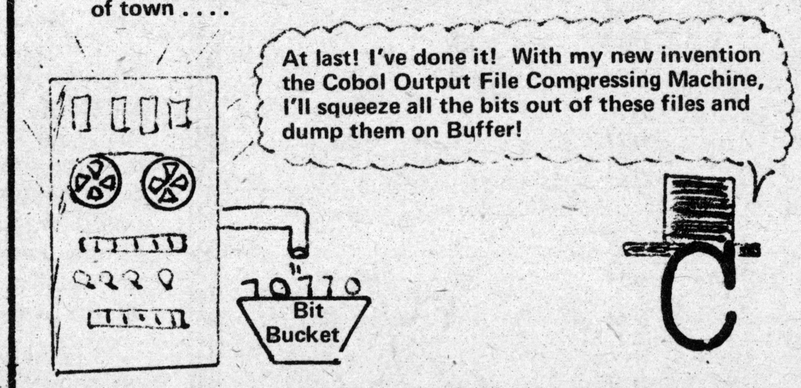
Quickly swallowing the last byte of Chex, he rushes to the line, and finds himself talking with the head of the city: the 360 Monitor!



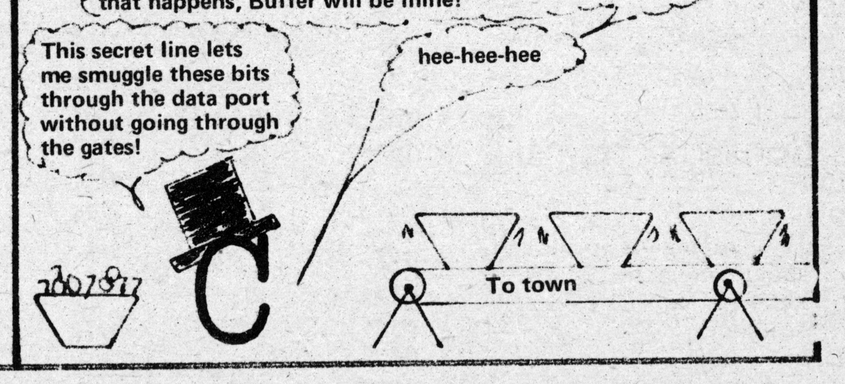
A master of disguises, he hides himself as a seemingly harmless parity bit, and speeds to the nearest NAND gate, where he catches a high speed Data Transfer Bus, heading for the endangered town of Buffer. As he travels, he thinks to himself –



Meanwhile, in a deserted index register on the other side of town . . . .



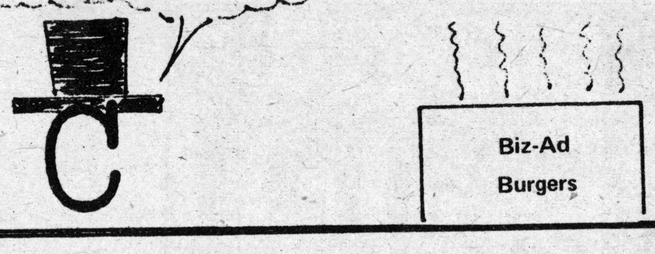
Soon, the entire town of Buffer will be engulfed with my output! Nobody else will be able to get in! When that happens, Buffer will be mine!



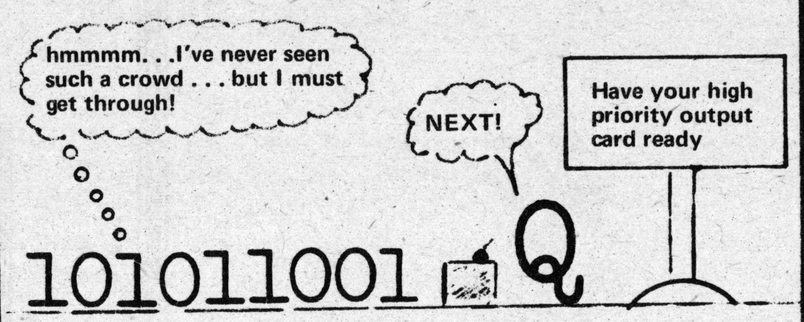
Once I have this area under my control, I'll have an unlimited supply of files to feed my compresser! All of 360 City will be under my control!

I, CORNELIUS COBOL, will be master of the system!

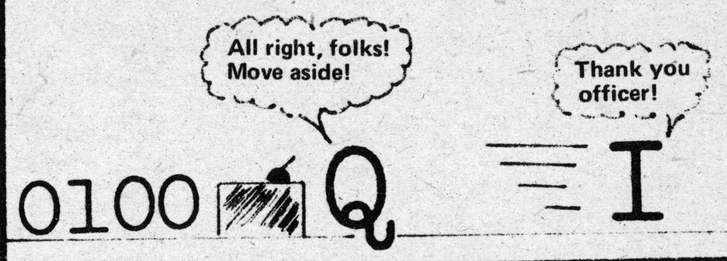
Today, Buffer!
Tomorrow, the world! But first, some lunch . . .



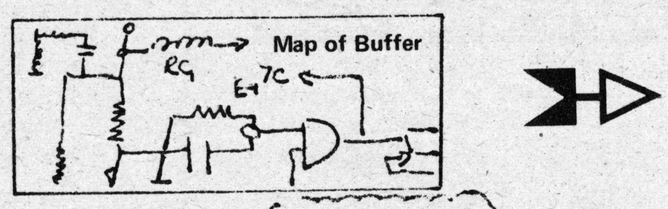
As Cornelius is busily munching his Biz-Ad Burger (and spitting error messages on the floor), Fortran Man arrives at the Output Queue, where he is backed up by the crowds –

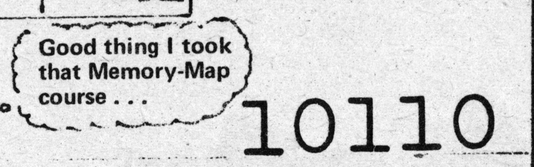


Not wishing to reveal his identity, the quick-thinking F-Man slips into a nearby unused storage area, where, concealed behind the counter, he changes his disguise to that of a Priority Interrupt. This allows him to swiftly bypass the queue . . .



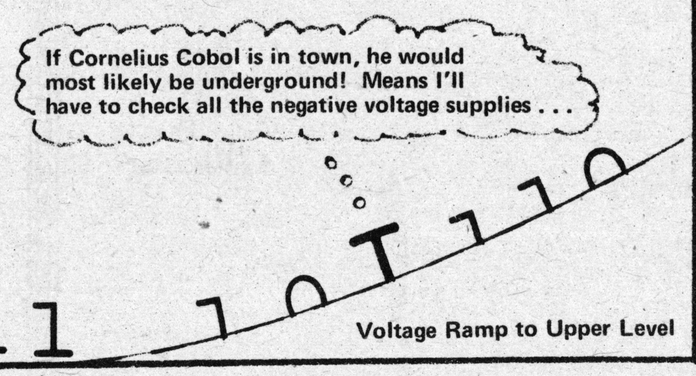
Not bothering to take time to change disguises, he quickly finds a city map . . . his great powers allowing him to memorize it instantly!



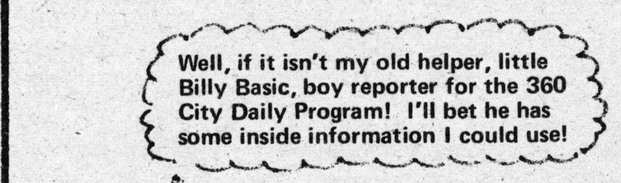


10 I 10110

Rapidly compiling this data, Fortran Man begins to formulate a plan of action . . .



He heads for the low-order part of town, where a number of known hangouts for dropped bits, invalid op codes, and other unsavory characters are located . . . when suddenly, he spots an acquaintance !



1I01 01B01

Slowly, so as not to arouse the suspicions of the surrounding riffraff, Fortran Man edges closer until he is right behind Billy Basic, and whispers the secret signal . . .

110I B1001

The pair split up, in order that they may travel separately to avoid attracting any undue attention . . . . . .

They meet soon thereafter in the notorious 999, a two-bit hangout on the low-order side of town . . . a collection point for all sorts of dropped-out bits, degenerate functions, and useless redundancies . . . owned by the semi-retired gangster Big Mho!

When he first came to 360 City, Big Mho was a bridge worker for military specifications, but this work soon exceeded his limited tolerance, so he dropped his current project (which severely reduced his power rating), and went into business on his own . . . in an old, abandoned bus bar, where he kept busy hiding criminal elements, fencing stolen joules and helping draft resistors sneak out of town . . .

On the way, Fortran Man stops briefly and changes his disguise, so that he now resembles a dropped parity bit . . . . .

TO BE CONTINUED...

FORTRAN MAN

Lee Schneider

Todd Voros

Hmmmmm . . . If I guess it right, I think I know where those bootleg files are going to — I'd better question Big Mho right now!

Careful, F-Man! He could give you a series resistance!

Don't worry about me Billy, . . . you stay here and watch, and I'll go inside and see if I can get any information out of Big Mho!

BIG AL'S New & Used Kilocycles

Gee, F-Man! I always miss all the fun !

While Billy Basic waits outside, Fortran Man changes his sign bit and branches into 999. As he suspected, Big Mho himself is tending the bar! Shoving his way through the crowd, he makes his way to the bar, and attracts Mho's attention . . .

Hey, Gimme a can of Bitz! And make it fast!

All right, already! Ya think I can't hear?

As Big Mho arrives with the can of Bitz, F-Man flashes a signal known only to certain groups of underground characters (an ESC char.), which identifies him as a fellow criminal . . .

Say, Mho . . . I heard about a big file shipment coming in . . . the Big C sent for me to help get it through in time . . . you know where I can find him?

Funny, he didn't mention anybody else to me . . . you sure you got your info right?

How should I know? Why don't we go see him and find out?

Big Mho, an experienced criminal, does not spill information easily . . . and soon becomes suspicious of all the questions . . .

Well, how about it? Do we go see the Big C or not?

Look mac, why don't you just . . .

Hey! Don't I know you from somewhere else . . . ???

Seeing that the trick will not work, and that Big Mho is becoming suspicious about him, F-Man quickly switches tactics . . . reaching over the bar, he grabs Big Mho, and . . .

All right, Mho! The time for funny answers is over! You tell me what I want to know, and fast!

Hey! Hands off, you bum! Who do you think you are anyway?

Big Mho breaks away, as Fortran Man suddenly drops his disguise . . .

THIS is who I am, Mho . . . and I'm taking you in!

GASP!

Let's get out of here

But Big Mho, who is not frightened easily, suddenly pulls a one-shot multivibrator from beneath the bar, and fires a barrage of one microsecond pulses through the room!

zap zap zap zap

ping!

You'll never get me alive!!

Using the momentary surprise, Big Mho leaps over the bar, runs out of the room and into the street outside — with Fortran Man in hot pursuit!

Lucky my response time is better than one microsecond . . . or I'd be a goner by now!

Out in the street, F-Man finds Billy Basic, who is just picking himself up off of the ground . . .

Which way did he go Billy?

He ran across the street to Big Al's lot and did a Cycle Steal, F-Man! He was heading for the south side of town, you'll never catch him!

But Fortran Man only smiles, and helps Billy to recover his potential . . . . . .

Don't worry, Billy! When I was pretending to pick a fight with Mho a few minutes ago, I was actually slipping a miniaturized Trace Routine into his pocket! He is sure to head straight for the hidout of Cornelius Cobol and I can follow him right from here!

As he and Billy head for the lot, to pick out a kilocycle for themselves, F-Man shows him a new device . . .

See this? It's a miniature data switch register! I can activate the trace routine right from here, and find its position by observing the display here!

Climbing aboard their Kilocycle, F-Man gives the tracing device to Billy, triggers the cycle into operation, and the chase begins!

I'd better do the driving, Billy! You don't know your way around 360 City like I do.

Just a moment . . .

Where is he?

Aha! He's heading for the I/O control register!

Just as I suspected! He's going to get out of the town of Buffer and try to lose us in the processor!

Hang on!

As they speed over the famous Wheatstone Bridge which isolates the lower end of Buffer from the main processor, Billy Basic keeps one pointer glued to the trace monitor

He's out of Buffer, and heading for the accumulator section.

He'll try to lose us by transferring around the registers!

Bufr

Acc

They are forced to slow down as they approach the Acc control center, one of the busiest sections of 360 City . . .

store!

load

compl

add!

xfr!

Keep going, F-Man! He's in there somewhere!

Patience, Billy! We must respect the rights of these other bits!

1 0 1 1

0 0 1 0

1 0 0 1

1 1 1 0

0 0 1 0

1 0 0 0

10110100 1100101001001

Fighting free of the great volumes of traffic, Fortran Man takes a short-cut . . . . . .

Hang on tight, Billy! I'm going to do a High-speed transfer through all the registers!

I don't think that . . . urk!

R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11

BUMP! BUMP! BAM! THUD! BAM! BUMP! BAM! BUMP! BUMP!

F-Man swiftly examines each register in stack .

He's not here! He must have shifted out at one of the other levels!

Whew! What a ride!

Although shaken up by the ride, Billy Basic still keeps watch on the trace position indicator . . . . . .

He's heading for low core ...

DIAGNOSTICS SECTION
Emergencies — Use rear entrance

Good!

Billy is somewhat mystified by F-Man's apparent unconcern that their quarry is escaping . . . . .

Why good?

Because, Billy, in 360 City low-core is protected! If Big Mho goes in there, he won't be able to get in! And that leaves him only one excape, and that is . . . .

Speed Limit 55 Kc

You're right, F-Man! He's headed for the power supplies!

And that means he's going under ground! He'll lead us right to Cornelius Cobol!

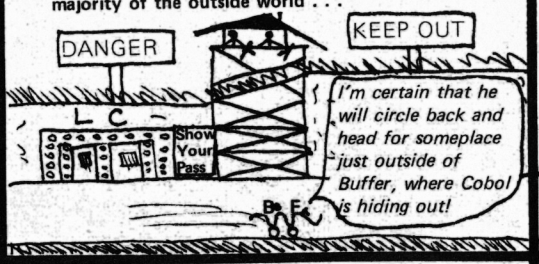
TO BE CONTINUED. . . . . .

FORTRAN MAN

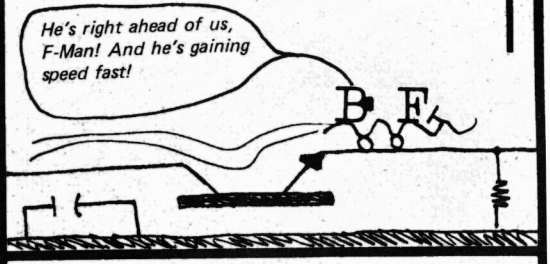
Lee Schneider

Todd Voros

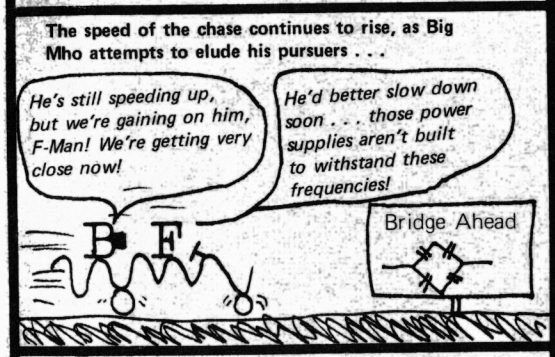
Fortran Man and Billy Basic speed past low-core, which is a fortress of protection against the majority of the outside world . . .

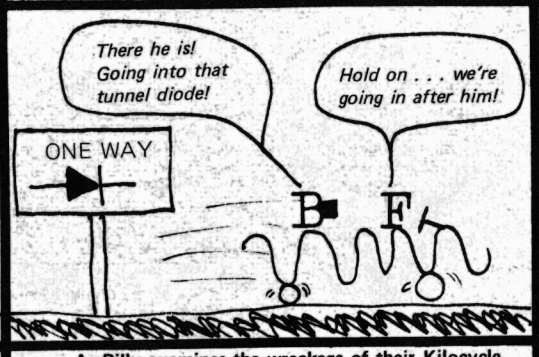


They finally reach their goal, entering through an unobtrusive side current limiter . . .

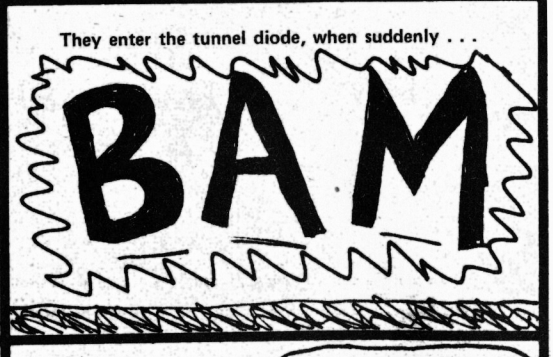


The speed of the chase continues to rise, as Big Mho attempts to elude his pursuers . . .

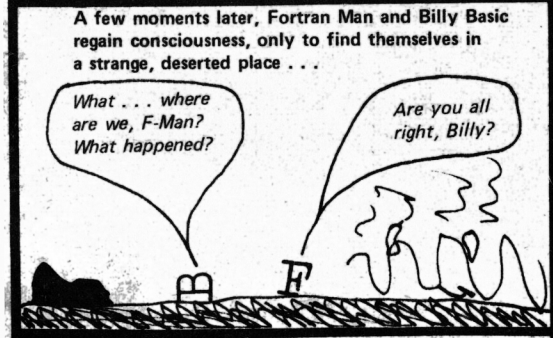




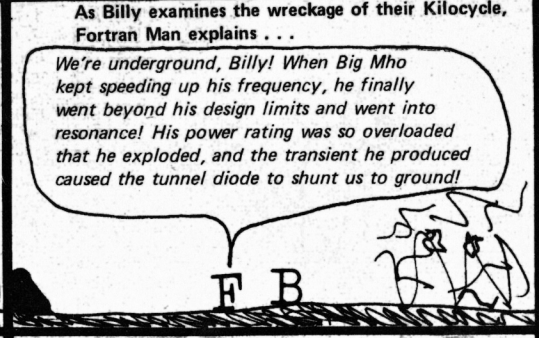
They enter the tunnel diode, when suddenly . . .

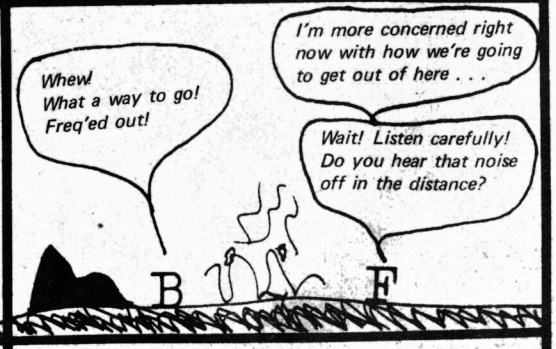


A few moments later, Fortran Man and Billy Basic regain consciousness, only to find themselves in a strange, deserted place . . .

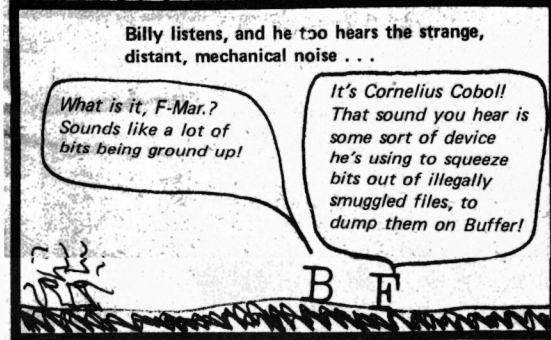


As Billy examines the wreckage of their Kilocycle, Fortran Man explains . . .

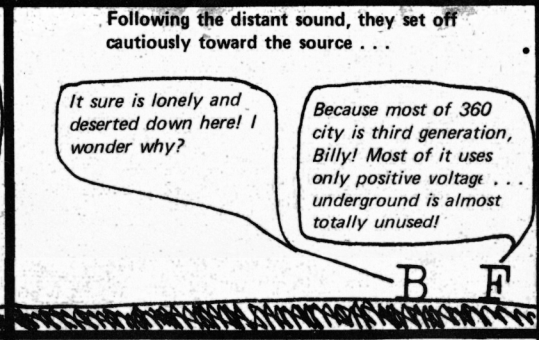




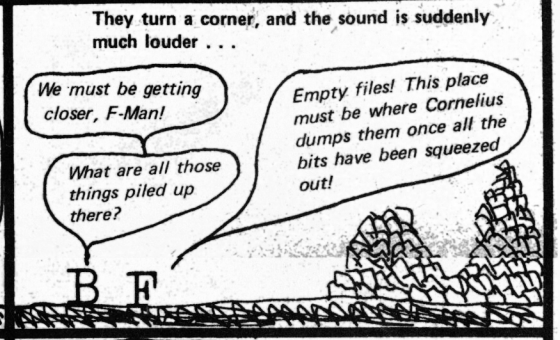
Billy listens, and he too hears the strange, distant, mechanical noise . . .



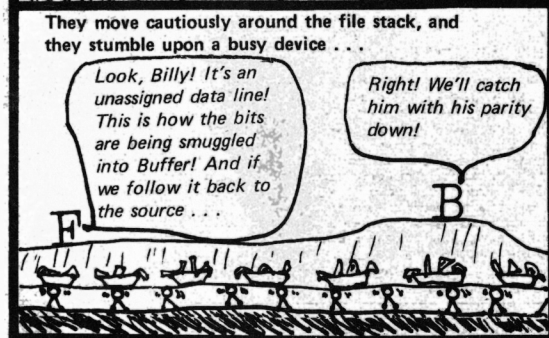
Following the distant sound, they set off cautiously toward the source . . .



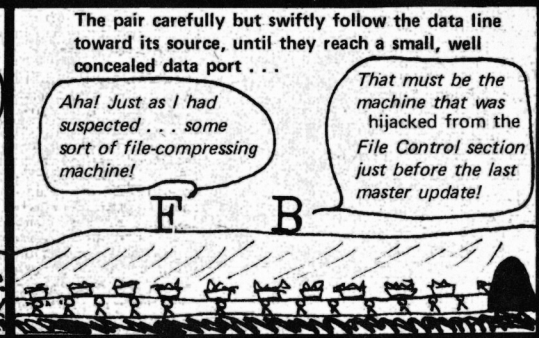
They turn a corner, and the sound is suddenly much louder . . .

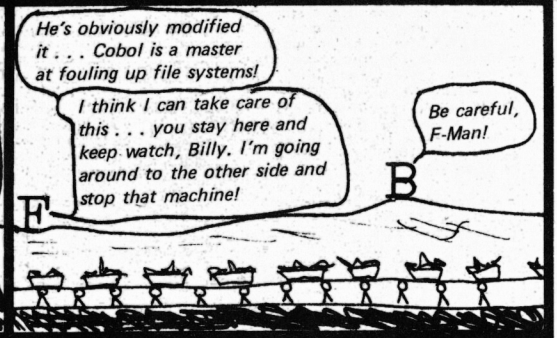


They move cautiously around the file stack, and they stumble upon a busy device . . .

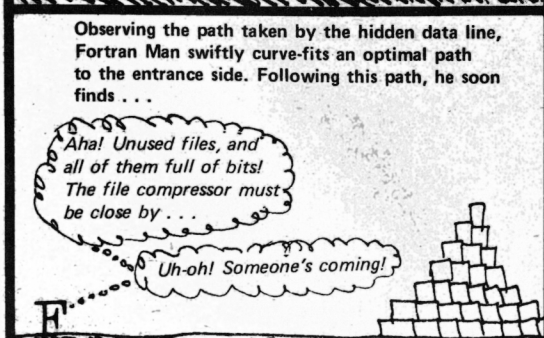


The pair carefully but swiftly follow the data line toward its source, until they reach a small, well concealed data port . . .

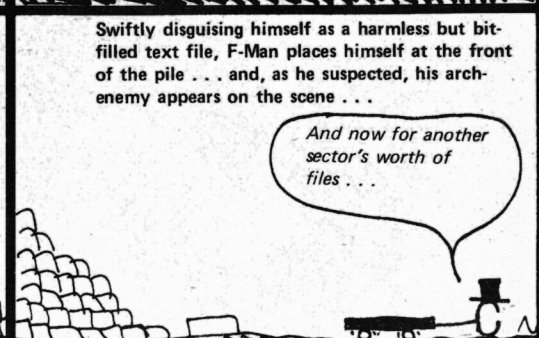




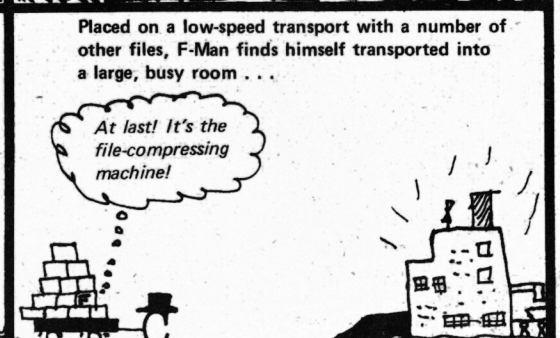
Observing the path taken by the hidden data line, Fortran Man swiftly curve-fits an optimal path to the entrance side. Following this path, he soon finds . . .



Swiftly disguising himself as a harmless but bit-filled text file, F-Man places himself at the front of the pile . . . and, as he suspected, his arch-enemy appears on the scene . . .



Placed on a low-speed transport with a number of other files, F-Man finds himself transported into a large, busy room . . .



TO BE CONTINUED . . .

But then, before he can do anything, Fortran Man is dumped into the file compressing machine!!

In you go . . .

For a moment, nothing happens . . . . . but then suddenly . . . . . .

Huh? What the . . . ?

PING

SPRONG!

ZAP!

FIZZLE!

STOP

Then a voice behind him causes him to turn suddenly . . . . .

I'll tell you why it's stopped, you file-filcher!

GASP! It's ...

That's right, Cornelius! And your file compressor is stopped because its full of RANDOM PASSWORDS, which I generated when you dumped me in the machine!

FORTRAN MAN!!

Even you know that you can't compress a file with a password on it!

And now, you're coming with me back to the main processor — to stand trial before the System Monitor! And you know what that means!

Yes, Cornelius! They'll take away your HASP number!

Then wouldn't . . . . .

At that moment, Billy Basic, who was still waiting on the other side of the port, steps out and blocks the way —

Hey, what the ....?

Hold it right there, Cobol!

But the wily Cornelius has planned ahead for this possibility . . . knowing that escape may be needed later . . . and hits a hidden interrupt button . . .

Look out, Billy!

Hee-hee

Ack!

ZIP

Before he can move away, the inexperienced Billy is caught in the trap!

As you may see, F-Man, Billy is caught in my TIMER TRAP! In just a few moments, the time will have run out, and your friend will be swapped out and lost forever!

You could leave him here and catch me, but I know you won't!

HELP!

HELP!

You fiend!

Bye-bye, F-Man!

Letting Cornelius Cobol run out the data port and head for the city, Fortran Man swiftly examines the device in which Billy Basic has been imprisoned . . . . . .

F-Man! This timer trap has a matrix lock on it, but you'll never reduce it in time!

tick tick tick tick tick

That's what you think, Billy. Hold on!

With incredible speed, Fortran Man manipulates the controls required to reduce the matrix and open the lock . . . . . .

Hurry F-Man!

```
R2 = 1.0
DIMENSION Q(50)
CALL XM(I,K,AB,Y)
A=A+SQRT(I*P(J))
DO 7 I = 1, 100
IF (Q - 3) 7, 7, 14
GO TO 33
READ, I, J
```

Then, suddenly, the lock is open!

click!

Quick, Billy! JUMP!

tick tick tick tick tick tick

Billy jumps out of the trap, and just in time!

tick tick

SWAP!

Billy joyfully rejoins Fortran Man, and the two head for the data port together . . . . .

Do you think we can catch him, F-Man?

No need to even try, Billy. If I know Cornelius, he's hidden himself away among the mass-storage units again.

Who knows where he is now . . . maybe on an unused disk sector, or the end of a scratch tape, or even hiding in the low-RAD district!

The best we can do is send for someone to come back and get the file-compressing machine — I'm sure it can be made useful again!

As they head back to BUFFER, another adventure over, Billy remarks . . . . . .

It just bothers me that someone like COBOL is out there, somewhere, waiting to take advantage of decent software!

Do you think he's coming back?

The criminal always comes back, Billy! All we can do is wait, and watch, and always be willing to fight for what is right!

Let's go home, Billy.

Right F-Man!

THE END

Lee Schneider

Todd Voros

FORTRAN MAN

Despair not Fortran Man fans, deep in the heartland of the USA the fertile minds of Lee and Todd are churning, churning, churning . . . a new F-Man series.

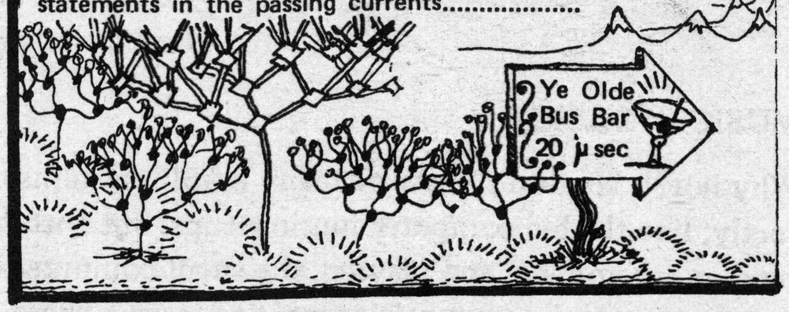
FORTRAN MAN

by Lee Schneider & Todd Voros

Yes, readers, once again it is time to set aside our programming pencils and soldering irons, and follow yet another episode in the fantastic adventures of that King of Compilers, Saver of Software, and ever fearless fighter for truth, justice, and the Algorithmic Way: the one, the only. FORTRAN MAN!

Our story opens today not amid the transients and turmoil of the vast metropolis of 360 City, which Fortran Man calls his home, but rather in the vast and peaceful countryside in that region of the computer world known as TRANSISTORIA - that ancient and venerable land oft times referred to by today's system components (in a reverent manner) as 'the Old Country'.

Far removed from the world of big industrial programs and multi-megahertz hardware, TRANSISTORIA remains a quietly peaceful place, where small local jobs border great expanses of unsorted data fields filled with bit bushes and logic trees, gently waving their branch statements in the passing currents.....



But today, in one of these villages, things are not so peaceful --- for in a dimly lit room of the local physicians office, a local job controller watches intently as his associate, the kindly old Doktor Debug, examines the remains of a recently terminated file.....

Hmmm....1st most interesting!

Tell me, Herr Doktor - is it.....?



Finishing with the examination, the doctor sadly pulls a clean coding sheet over the body and turns away from the lookup table.....

Yes, I'm afraid so - just like the others!

You say you found him like this?

Yes, Herr Doktor - we found him at the edge of the data field, near the pool.....

Herr Doktor, this is incredible! Seven cases so far this cycle - impossible!

Yes, I agree it seems unbelievable, but there is no arguing with the facts! This file, like the others, has been completely drained of data! And, as before, the only evidence of anything suspicious are those two small file marks on the body of the victim!

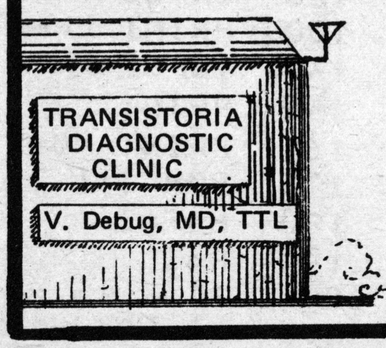
In all my years of practice and thousands of cases, I have diagnosed and debugged a great score of faults and glitches, patched sick code and set fractured breakpoints ..... but never have I seen a case like this!

But, Herr Doktor! What kind of a fiend would go around putting the byte on innocent files like this?

More important, what are we going to do about it? The countryside is in total oscillation! Every file in town has closed itself off and gone into hiding! Our town locksmith can't make file protect keys fast enough.....and still we are losing files!

I tell you, we need help! But who? Who can we turn to to get us out of this crisis?

With a sudden look of determination, the doctor branches out of the diagnostics area and proceeds into the strangely deserted village common, with the local controller close behind.....



Come with me, officer - quickly! Healtime is running out! We must send a message.....

I think I know someone who can help us - and this situation calls for the best!

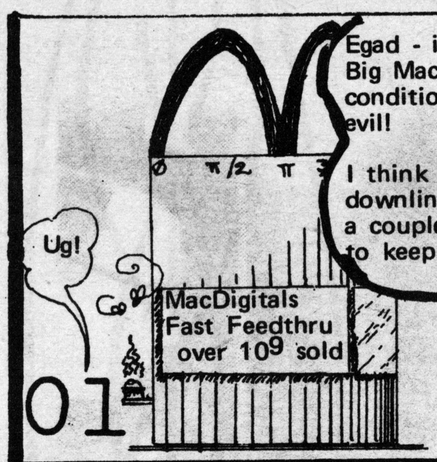
Doktor Debug and the local controller hurry to the village UART, and an urgent message goes out over the lines....

Meanwhile, in faraway 360 City, a well-known system crimefighter is just returning home from lunch.....

Egad - if I don't stop eating these Big Macros for lunch I'll be in no condition to combat the forces of evil!

I think I'd better go downline and run through a couple of fast DO loops to keep myself in shape!

Ug!



Fortran Man heads downline for a brisk session of stretching his DIMENSIONS and lifting weighted sums - when suddenly he is discracted by a rapidly flashing indicator.....

Wha....? Its my wrist register -- and this pattern indicates I'm needed!

I'd better get back home fast!!

Shifting into high-speed run mode, Fortran Man heads back towards his resident location.....

Within a few microseconds, he is examining the most important message which has just come in on his direct pipeline to the system I/O control center....

Hmmmm.....from my old friend Doktor Debug in the Old Country and it looks like serious trouble!

There's no time to lose - I'll leave for Transistoria immediately!

Doing a high-speed sort, Fortran Man gathers a few essential items and within another few microseconds is ready to depart.....

Lets see.....I'll need my disguise kit, some clean coding forms, and I'd better take my Transistorian-to-ASCII lookup table.....

After a quick change of sign bit, he branches out of his resident location and ventures forth into the mainstream of 360 city, where he is soon hailed by a familiar ally.....

Hey! F-Man! Wait up!

F-Man's old friend and newest ally, Billy Basic, watches excitedly as Our Hero gets out his passport....

I'll bet you're off on another adventure, huh F-Man? Can I go along? Huh? Can I?

I've been practicing a lot lately, F-Man! My DIMENSIONS are getting bigger, and I can run a DO loop almost as fast as you can!

TO LONG-DISTANCE DATA PORTS

Sorry, Billy - not this time! I'm going somewhere very far away and outside of your operating specs.....and this job looks like its going to be very dangerous!

Besides, Billy.....I need you to stay here and keep and eye on 360 city for me....and thats no small job!

All right! Next! Come on! Move it along!

SHOW YOUR HASP NO.

His HASP number validated, Fortran Man passes the port and boards one of the many transports which serve the channel.....

Turning, he waves farewell to Billy Basic and to exchange some final COMMENT statements with him...

Gee, F-Man - I wish I were going along!

You'll be all right, Billy! Take good care of 360 City for me!

I'll try! Be careful! Don't take any wooden NOPs!

As the long-distance transport pulls out of the port and heads down the channel, Fortran Man watches as 360 City recedes into the distance - and has time to contemplate his upcoming adventure....

It sure will be nice to see my old friend Doktor Debug again - I just hope I arrive in time to help!

From his brief description, I have a feeling this could be the toughest and most dangerous assignment I have ever attempted!

FORTRAN MAN



by Lee Schneider & Todd Vorbs

As you may recall from the last episode, our hero Fortran Man has received an urgent call for help from his old friend Doktor Debug in the 'Old Country' of Transistoria, where a strange and frightening plague has struck the land.....

It strikes without warning.....stalking the land, lurking in the shadows and pouncing on passing files - leaving them terminated most abnormally, drained completely of bits, leaving only two small file marks on the victim's body!

Even the learned Herr Doktor has been powerless against the evil affliction.....

And now, responding to the desperate call for his help, Fortran Man is found aboard a long-distance transport, many milliseconds down the channel from his native 360 City.....

He has traveled for many cycles since leaving the busy ports of 360 City – and here, far from the complex structures and nanosecond rates of the Big City, the gentle currents and slow ripples flowing down the same channel are almost enough to inhibit any thoughts of deadly menaces and hazardous adventures.

Ahhh ..... nothing like the aroma of that err-free I/O air!

But Fortran Man, knowing his urgent duty, does not for an instant halt his computation of the facts at hand . . . . . even as they cruise by the Great Planes and he offhandedly pauses to admire the graceful flux of wild gauss as they swim among the eddy currents along the bank and nest within the cores of ancient, low-level logic trees .....

hmmmm . . . . missing bits . . . . . file marks . . . . . maybe . .

Below the Great Planes come the vast Data Fields which border Transistoria- ..... and here they would often pass small villages where the age-old process of data collection goes on as always, with rows of hard-working Stack Pushers moving their data stacks under the ever-watchful supervision of the local Stack Pointer.....

Come on!
Move it along!
This way!
Come on!
Move it along!

The journey stretches on, until, finally, the ever-flowing channel arrives at the fathest reaches of its domain—in the ancient land of Transtoria!

With the great peaks of the Monolithic Mountains towering in the distance, the drive current of the transport is at last cut and they float gently into the port .....

Just as I remember it - the last of the truly remote terminals!

Arriving at last at his port-of-call, F-man is shifted ashore among the other passengers ..... Quickly he scans the crowd for his old friend, and immediately hails him in the customary manner .....

CALL DEBUG (I,J,K) !

RETURN !

PORT OF TRANSISTORIA
110 baud
300 baud

F-Man and the good Herr Doktor hurry across the dock towards each other, and at last the old friends meet once again .....

No need to address me in such formal terms, F-Man ..... considering how long we've known each other!

Sorry—force of habit! How is the situation here?

Not good! Three more files terminated in the last cycle—we need help! And quickly!

You know I'll do everything I can .....

EMERGENCY FLOAT CONTROL VALVES

Follow me, F-Man! In the interest of time, I've arranged it with UART Central for you to bypass Customs .....

Good! I've always prided myself in keeping my code in good order!

Speaking of which, Herr Doctor, how have you been lately?

Ach, busy as always, especially since this terrible plague has broken out .....

CRC / CUSTOMS
BYPASS

..... and since poor Mrs. Debug's termination not so long ago, I am, alas, a stand-alone job once again ...

But then, I'm not completely alone ... I have my beautiful daughter Parity to keep me company! Have you met?

Greetings, mein Herr! Velcome to Transistoria! Mein father has told me so much about you!

Uh, hello .....

The formal introductions completed, the three of them exit the port and head for the village .....

Tell me, F-Man, do you have any ideas as to the cau. of this mysterious affliction we are up against?

Perhaps, Herr Doktor ..... it has occured to me that maybe this is not a disease at all, but rather the work of some demented program!

Hmmm .... this could be! Come with me to the local job controller office and perhaps we can check this out .....

A short time later, they are in the controller office, further compiling their theory .....

Well, F-Man, I've checked with the regional APL, and they report all inmates fully accounted for!

APL?

Asylum for Programmatic Lunacy but I wouldn't put too much faith in their reports .... their records are so confused it's often difficult to tell the keepers from the inmates!

Then, of course, there is always the possibility that one of our local subroutines has gone mad, although I have not noticed anyone behaving in an abnormal manner ..... perhaps it is an outsider from another village .....

Well, whoever it is, I have a plan to capture the culprit! Here is what we must do .....

I vant to help too!

Fortran Man describes his plan to the others, and they branch out of Job Control Headquarters, each heading for their respective tasks .....

I will gather my deputy routines, F-Man .....

Good! When they are assembled, I have specific insturctions to give to them .....

Run home and fetch my bag, Parity dear—I have many calls to make .....

Yes, father!

Later that cycle, as darkness falls, the two old friends relax in the Doktor's living room, taking refreshment at the Doktor's rustic, hand-carved symbol table .....

Parity and I have checkpointed every address in the village, using file-protect passwords to which *only I* have the key!

Good, the Controller's deputies have the village surrounded, and the curfiew will assure that all subroutines are RETURNed home by this time .....

Suddenly, the conversation is interrupted by a strange noise from the next room.....

Eh? What's that—it seems to be coming from my daughter's room!

I'd better check my Parity .....

But before the kindly old Doktor can move, Fortran Man leaps over the sumbol table and rushes for the door into the next room .....

Don't worry, old friend—Parity is safely staying with the job controller at his headquarters!

Don't you see? I have deliberately made *this* address the *only* unprotected location in the village, which means if your insane program wants a file .....

Of course! He must come *here!*

Stand aside! *I'll* handle this!

Ready to apprehend the villanous culprit, F-Man bursts through the door ..... but then, suddenly, the normally fearless fighter of evil stops short—as a sinister shadow falls over the room and he stares in disbelief at the figure before him .....

GASP!!!! It's ... it's ..

FORTRAN MAN

By Lee Schneider & Todd Voros

****

In our last episode, Fortran Man completed the long, multi-cycle journey down from the channel from 360 City, relocating himself from his native home to the 'Old Country' of Transistoria . . . There, past the Great Core Planes and beyond to the very edge of the Monolithic Mountains, he is once again re-united with his oldest friend and ally, Herr Doktor Debug, with whom he joins forces to combat the mysterious plague which has struck the land, leaving file after file terminated most unnaturally — drained of life-giving bits!

On the assumption the plague is the work of a demented program, Fortran Man and the Doktor compile a plan. With the aid of the Doktor's beautiful daughter Parity, they seal off the town, checkpointing every address with pass words known only to them . . .

Only the Doktor's resident address remains unchecked, and here F-Man and the Doktor wait . . .

Suddenly, a noise from the next room alerts them! With his usual speed, F-Man branches into the room, but them . . .

. . . he stops! The great Fortran Man, fighter of Progammatic Evil and conquerer of Cornelius Cobol, single-steps back in amazement at the shadowy figure before him . . . and as that sinister form whirls about to face him . . .

!!

GASP! It's . . . it's . . .

COUNT ALGOL!!!!!!

Before F-Man can recover from his surprise, the evil Count whirls about once more and vanishes from the room . . . moving with such force and speed that even Fortran Man is tossed aside like an empty file . . . ! !

An instant later, Doktor Debug appears in the doorway to investigate the sudden oscillations taking place in his daughter's room . . .

Good heavens, F-Man! What happened in here?

Did you see who it was?

Oh, I saw all right — and I still don't believe it! And neither will you when I tell you . . . it was — Count Algol!

The Doktor and F-Man return to the living room, and there is immediate discussion of the startling discovery which F-Man has made . . .

No, F-Mqn — I'm really not that surprised . . . you might even say I sort of expected it!

But . . . I thought Count Algol was only a legend!

No, F-Man . . . when you have spent as much of your life as I have in the Old Country, you know that Count Algol is no legend!

But . . . who is he? Where did he come from?

The Count comes from an old and, illustrious family, F-Man — the house of Algol is one of the most famous of European lines, and the Count himself is a direct descendent of the great King 60!

Yes . . . I do recall studying the House of Algol . . . some of my own ancestors were of that house . . . but, what of the Count? What happened to him to make him from a respectable compiler into the evil destroyer he is today?

The Count is one of the oldest of the Algol lines, F-Man, and in his own time he was most respectable!

And, as computation goes, his time came to be phased out — replaced by newer versions!

But the Count would not go! Thrown out of Europe, deprived of his own files, he now lives off others!

The discussion continues long into the late cycle, as the Doktor gives Fortran Man the background of his newest and perhaps his most formidable opponent . . .

F-Man learns how the Count wandered across Europe from system to system, always keeping one step ahead of the updates which would phase him out . . . and how, with each move, the Count would absorb the contents of one innocent file after another, growing stronger with each input . . .

And, among the discussions, F-Man and the Doktor begin the compilation of another plan, this time a plan which is oriented directly towards the termination of the Count . . .

On the rising edge of the next cycle, Fortran Man and Doctor Debug relocate themselves to the lower boundary of the data field, where they are met by Parity (who has spent the previous cycle staying safely at the local Job Controller's office . . .)

This is the Count's castle, F-Man — you know what to do now . . .

Yes, I'm sure that the plan will work . . .

Are you sure you don't want me to accompany you, F-Man . . . after all, after an encounter with the Count, you may be needing my services . . . !

No, Herr Doktor, we've discussed all that already . . . you should know by now that for things like this, I never run parallel process — it's a case of stand-alone processing.....

Well, be careful then! The Count is a dangerous opponent! I want you to RETURN with all of your variables intact..!

Me too, F-Man! Promise me you vill be careful!

I promise, Parity . . .

I didn't want to worry them, but the Doktor is right! Count Algol is perhaps the strongest opponent I have ever been up against — I am going to have to be very careful!

Leaving the Doktor to mind his Parity once more, Fortran Man climbs over the wall of file-control blocks and enters the data field . . . moving directly for the castle of his foe . . .

Crossing the great open DIMENSIONs of the data field, F-Man encounters a small-scale hardware bug, warming itself on one of the many outcroppings of silicon.....

Nothing to worry about . . . a hardware bug never misbehaves while someone is watching it . . .

After the lengthy but interesting journey across the data field, Fortran Man stands at last at the entrance point of Count Algol's castle . . . the once dynamic structure crumbling into useless bits from lack of refreshing . . .

This place certainly has a feeling of abnormal termination about it . . .

Looping around the falling blocks of data, Fortran Man passes through the entry point of the castle and enters into the domain of the evil Count . . . and F-Man CALLs his opponent out to face him . . .

COME ON OUT, COUNT!

YOUR NUMBER IS UP!

For a moment, there is only the sound of the echoes of F-Man's signal dying away . . .
Then, with incredible speed, the entry point of the castle slams shut! F-Man spins about, and once again is face-to-face with . . . Count Algol!

Aha! So there you are!

Prepare to meet your match, you despoiler of innocent files!

But Count Algol is confident in his power, and with the blinding speed which is his trademark, he lunges straight for F-Man!

Fortran Man, however, shows speed of his own, reaches into his matrix, and pulls out . .

A CROSS ASSEMBLER, Count!

This is one thing which even your power cannot stand against!

Holding the cross–assembler towards his foe, Fortran Man drives the count up the voltage ramp . . .

Back, you fiend!

I'm going to force you right up to the highest tower of the castle, and lock you in there!

Even with your high-level language ability, you won't be able to escape, and Transistoria will be safe!

Slowly, increment by increment, Fortran Man ups the Count, until finally they reach the top of the castles highest data structure . . . but then, as fate would have it . . .

All right, Count! Now we . . . OW!

clink!

uh-oh . . .

Seeing his chance to escape imprisonment, Count Algol leaps at Fortran Man before the cross assembler may be recovered . . .

ACK!

F-Man steps back to avoid the attack, but the decaying data structure crumbles beneath his weight, and . . .

And at this moment, from a vantage point far from the castle, the townspeople are witness to a terrible sight . . .

GASP!

Look out!

Fortran Man!

Don't look, Parity dear — this could be his final END . . .

STAY TUNED FOR: F-MAN LEARNS TO FLY, OR HOW TO BURY YOUR SOFTWARE MISTAKES!

. . . DRAWINGS BY A. MIYA . . .

FORTRAN MAN

by LEE SCHNEIDER & TODD VOROS

As you may recall from our last episode, things have not been running so well for Our Hero . . . . . .

The terrible plague which struck the 'Old Country' of Transistoria had all the indications of being the work of a demented program, and Fortran Man (with the aid of his old friend Herr Doktor Debug) set a trap for the culprit – only to discover that his foe is far more formidable than he had imagined – none other than the ancient and powerful Count Algol!

But Our Hero does not retreat in the face of adversity – he pursues his foe to within the very walls of Castle Algol, there to battle the evil Count on his own home ground!

The plan to terminate the Count almost works – but amongst the crumbling data structures of the unrefreshed castle, a slight mishap occurs . . . . . .

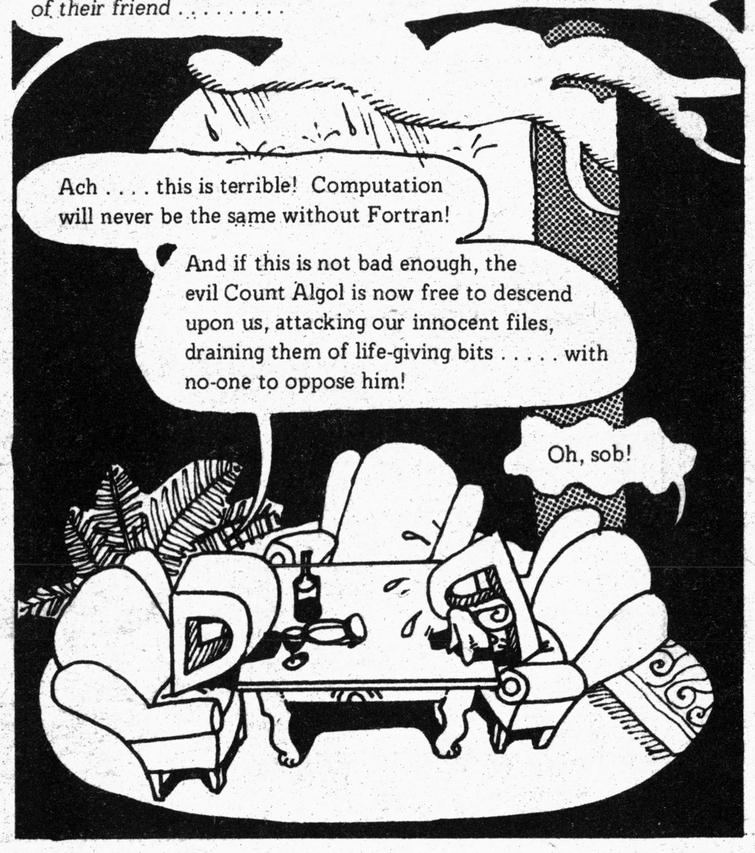
And now, alas – an undercurrent of doom saturates the land of Transistoria . . . . . .

. . . . . for less than a cycle ago, arrays of Transistorian villagers stood at the edge of the great Data Fields and watched with horror and dismay as Fortran Man, retreating from sudden advance of the Count, is thrown from the highest tower of the castle, and swiftly disappears into the ground below . . . . . .

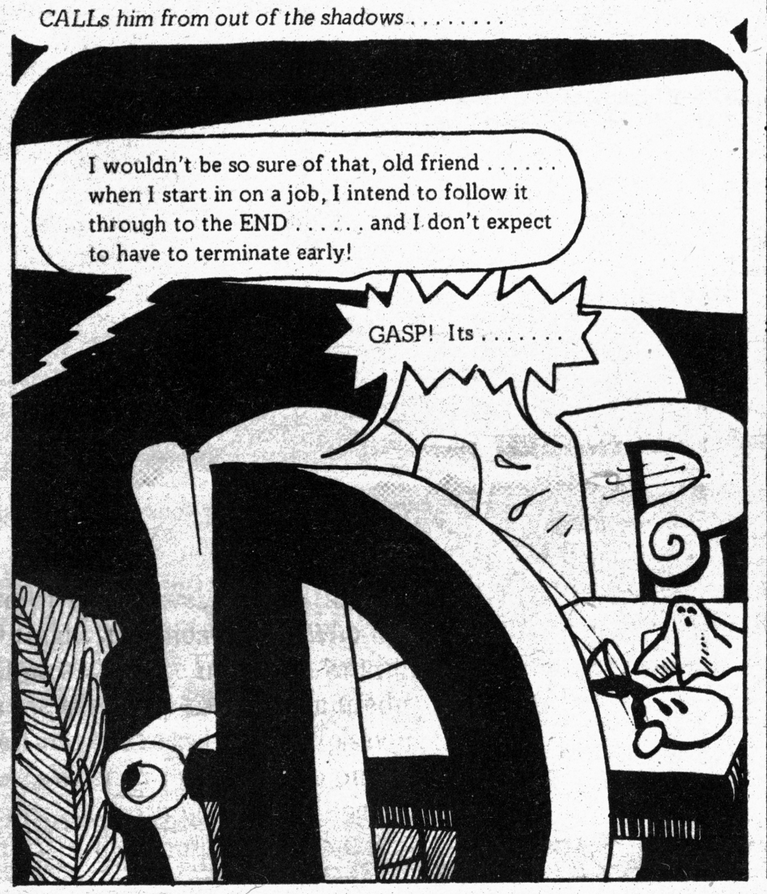


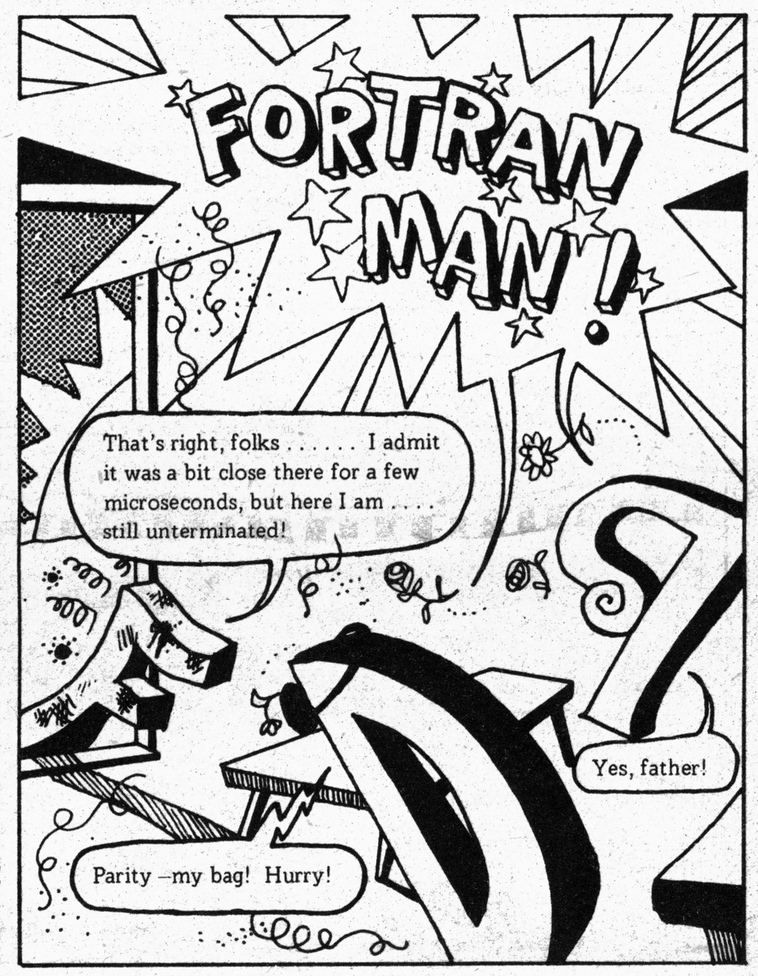
. . . . . the entire village is in hysteresis . . . . . .

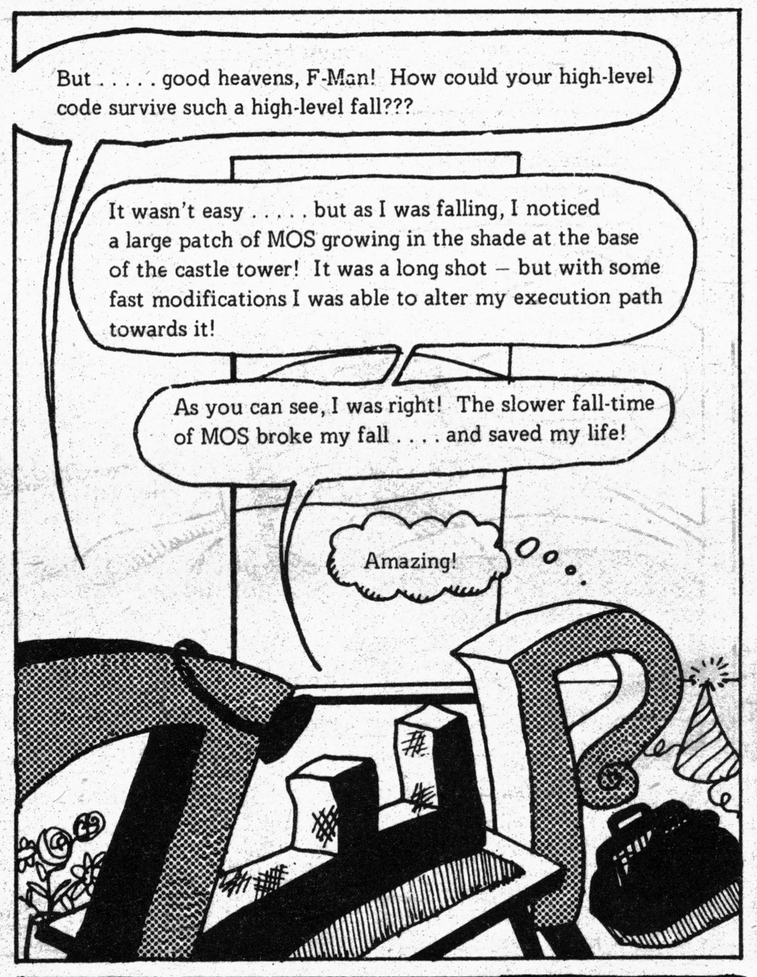
. . . . . .and nowhere has the gloom descended more heavily than in the resident location of F-Man's old friend, Herr Doktor Debug, where the Doktor and his beautiful daughter Parity mourn the termination of their friend . . . . . .



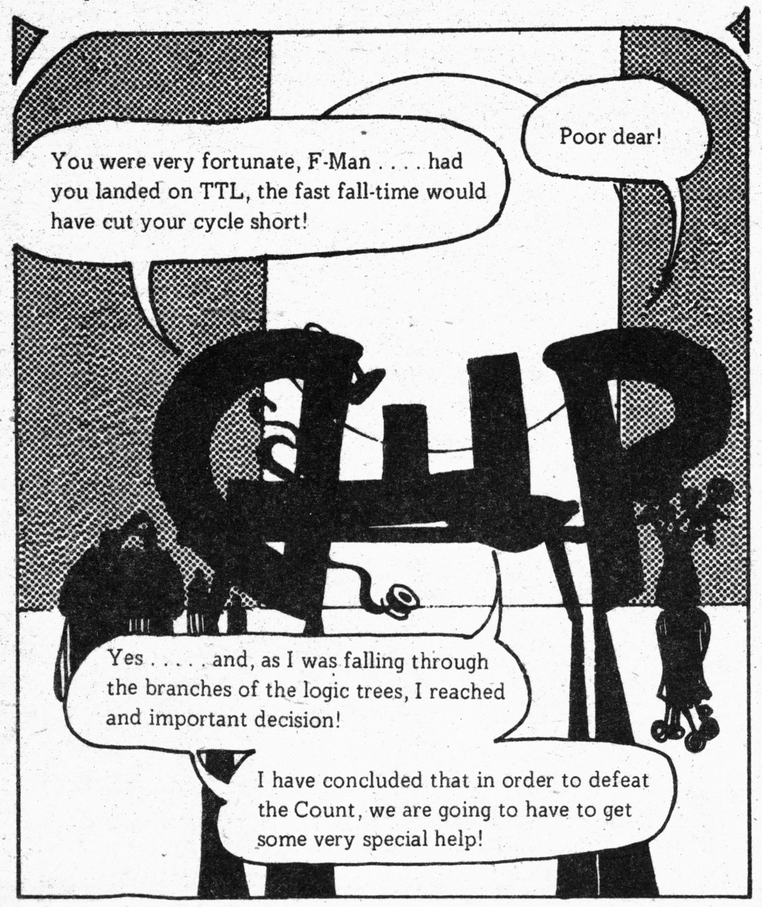
But the good Doktor is not so engaged in thought as to miss a slight noise from the doorway, and as he turns about, a familiar voice CALLs him from out of the shadows . . . . . .

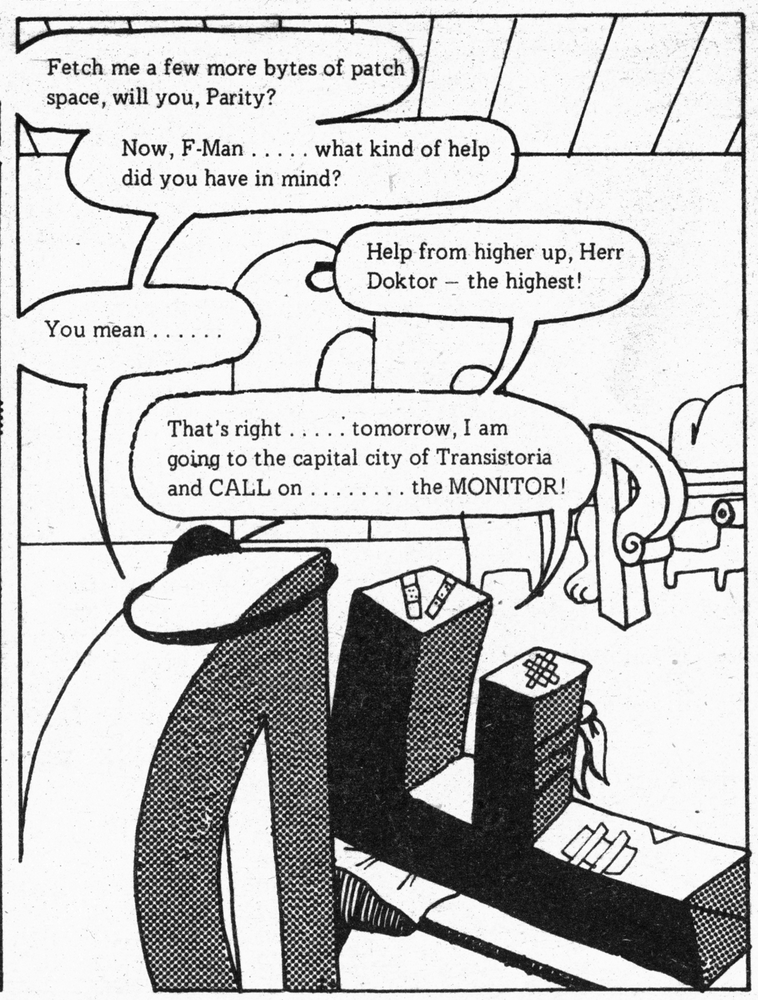


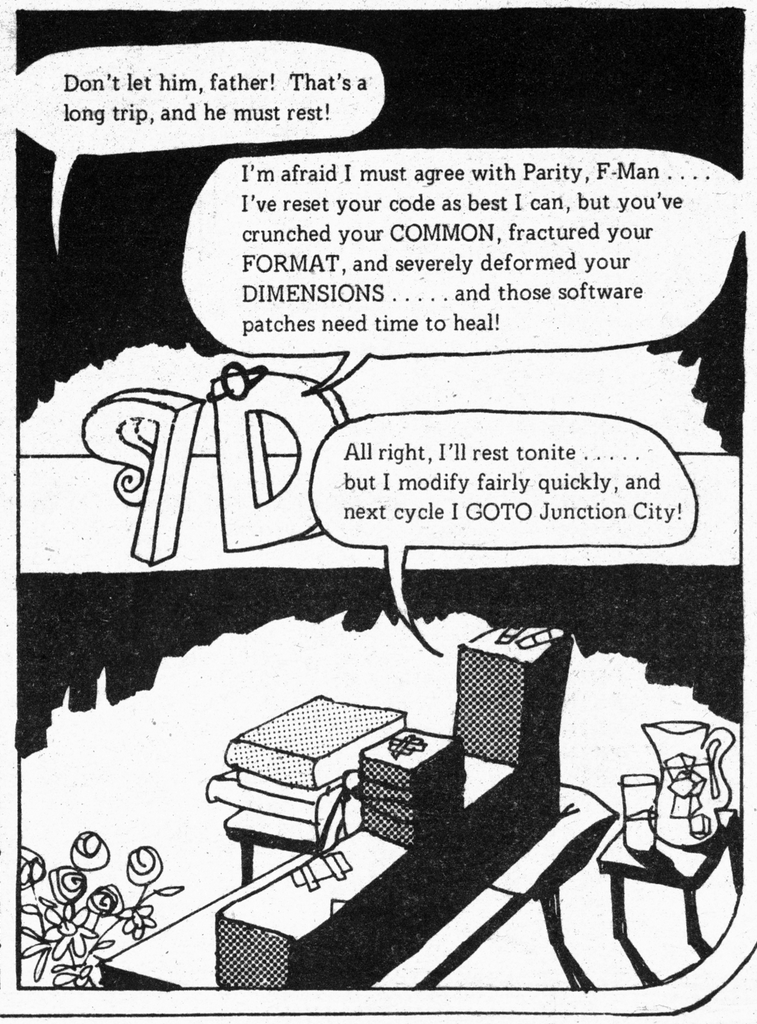




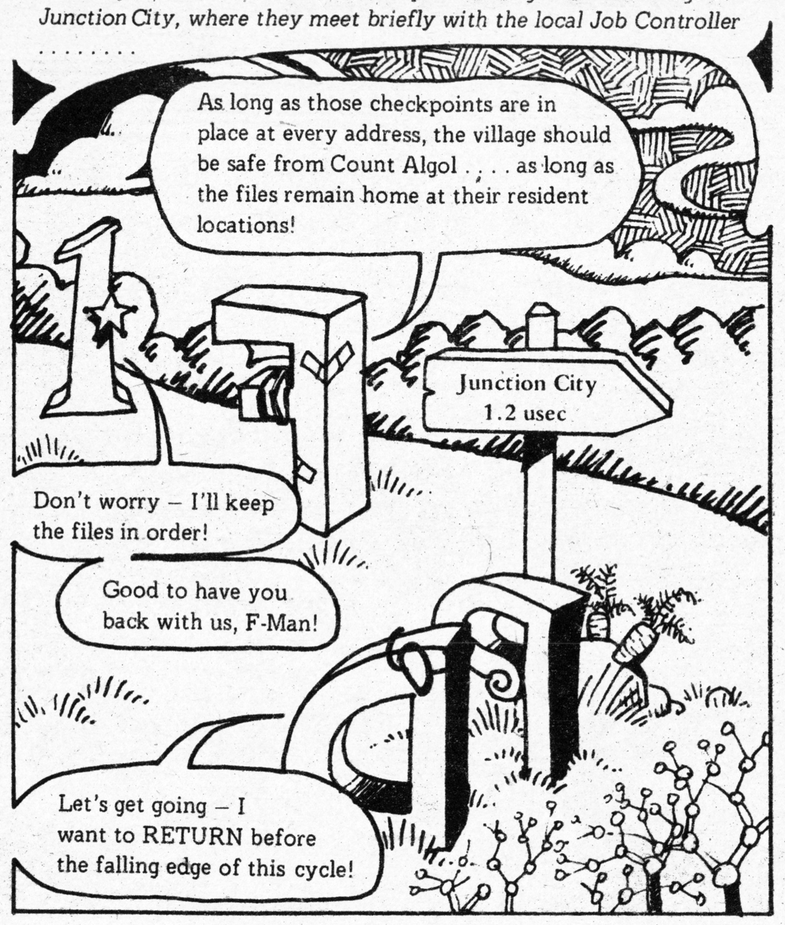
After a fast scan, the good Doktor goes to work on his old friend and new patient . . . . . .



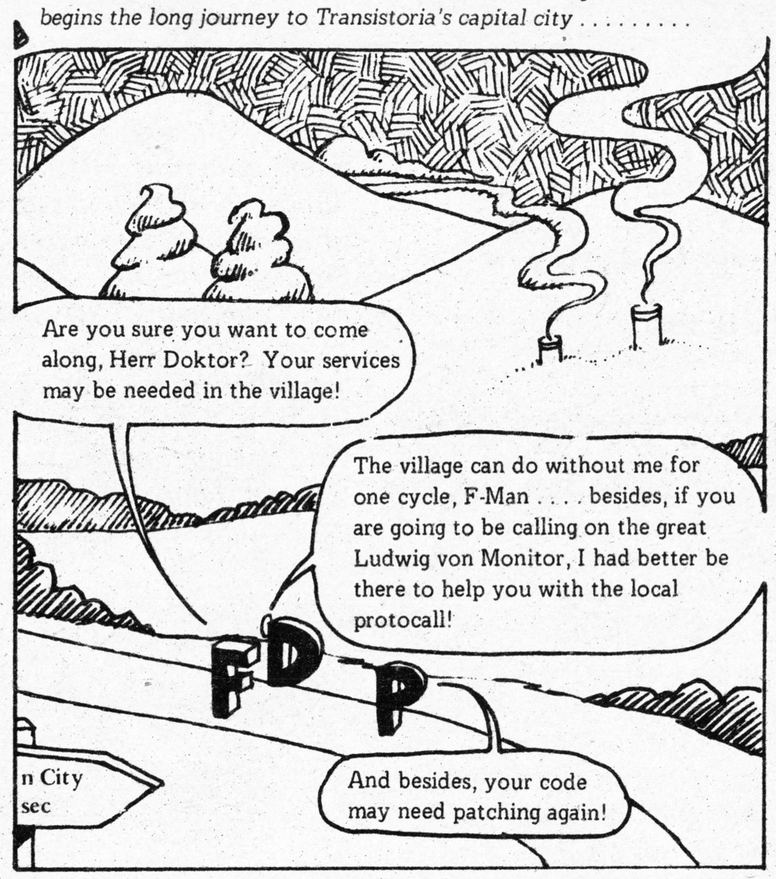




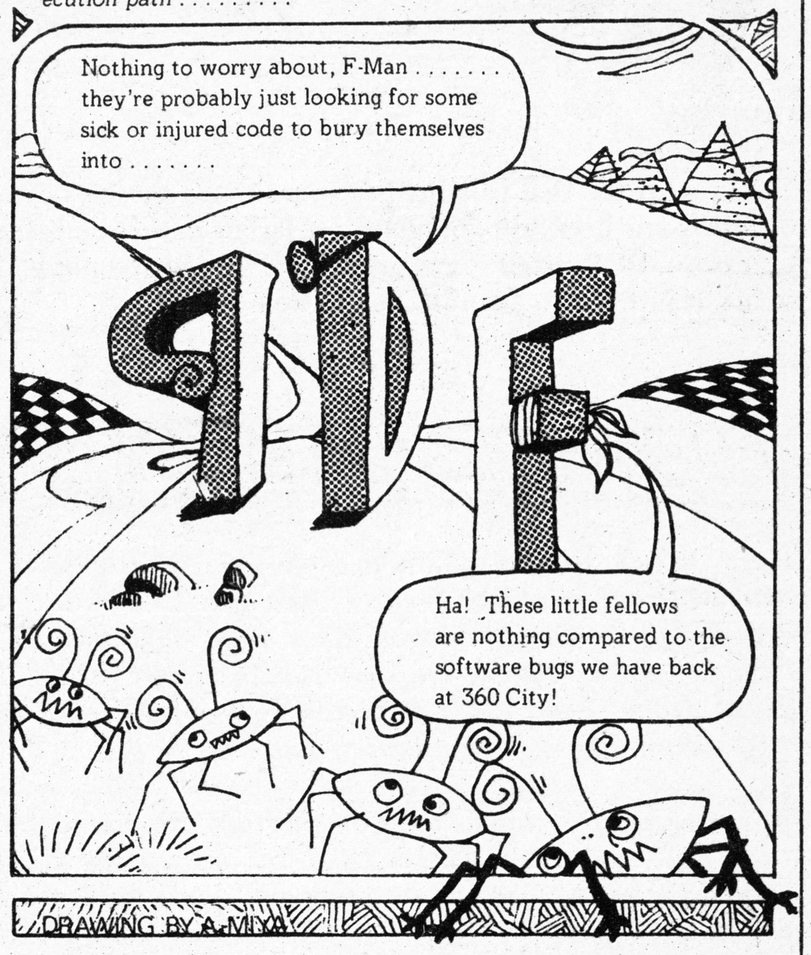
Soon after the start of the next cycle, the freshly patched F-Man and his companions relocate to the data path leading from the village to Junction City, where they meet briefly with the local Job Controller . . . . . .



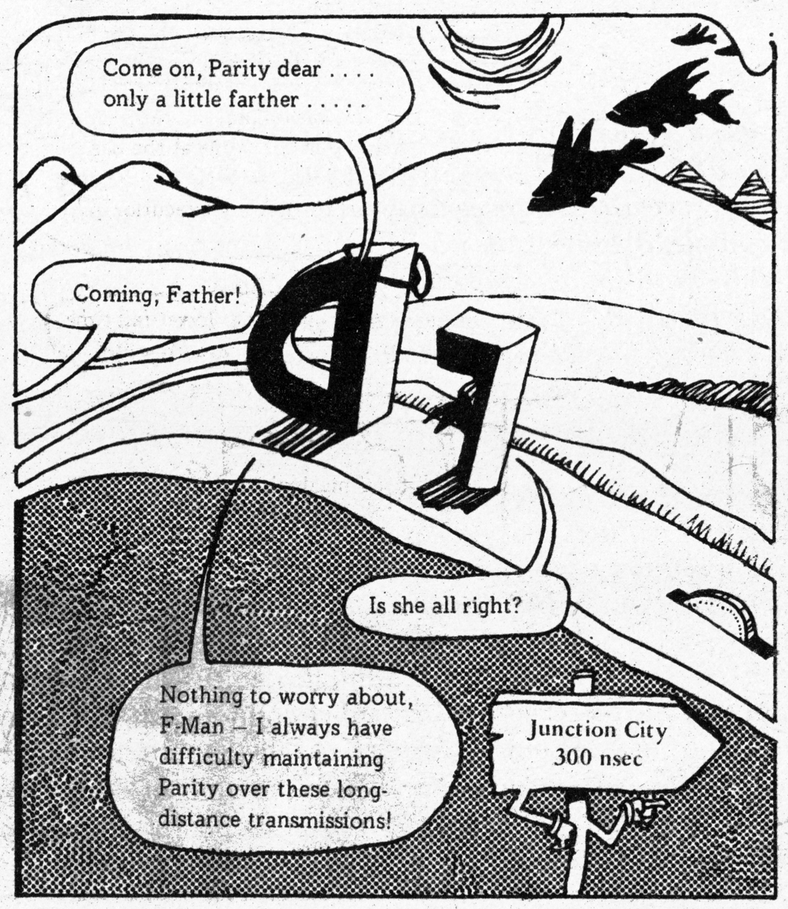
With the Monolithic Mountains towering in the background, the trio begins the long journey to Transistoria's capital city . . . . . .



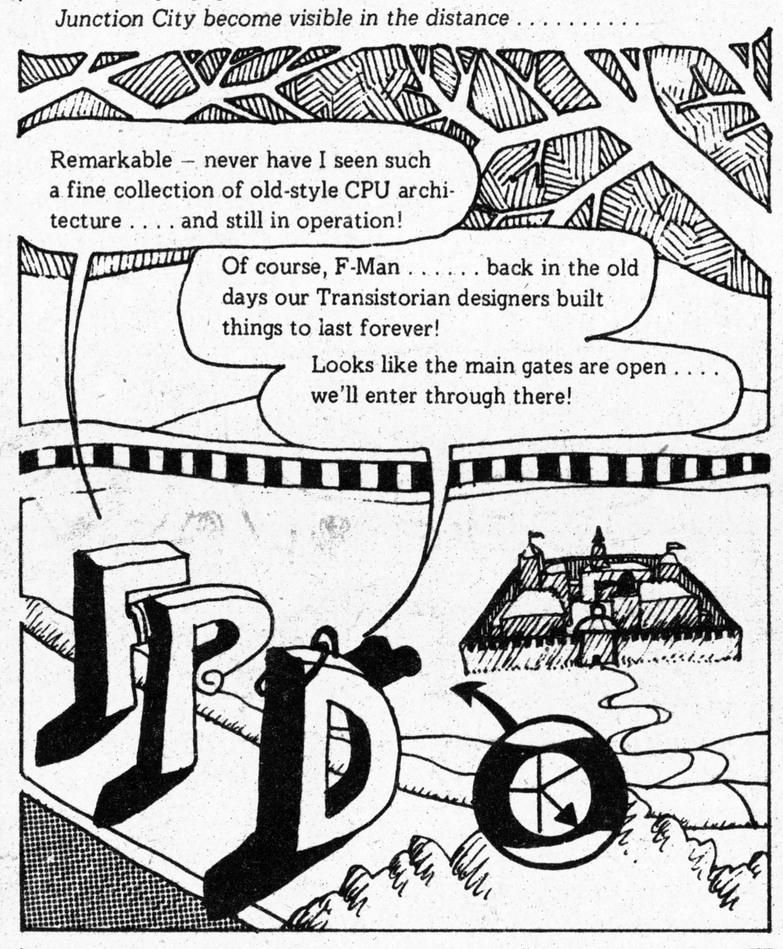
The journey stretches onward . . . . . and some time later it is interrupted momentarily as a small band of software bugs cross their execution path . . . . . .



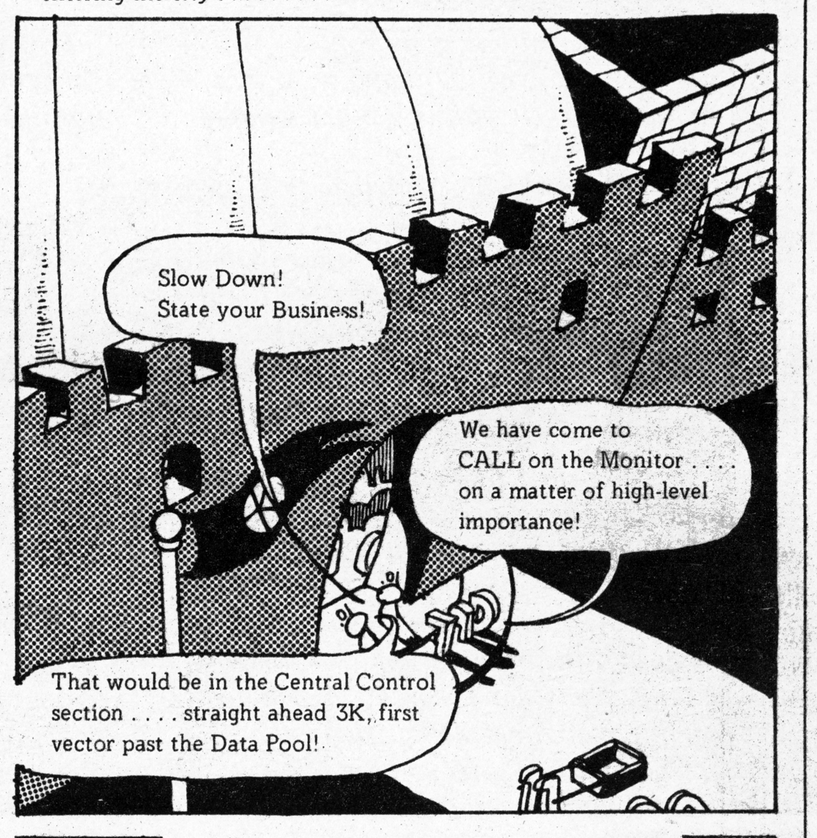
Still later F-Man and the Doktor must halt again to allow Parity to catch up with the rest of the group . . . . . .



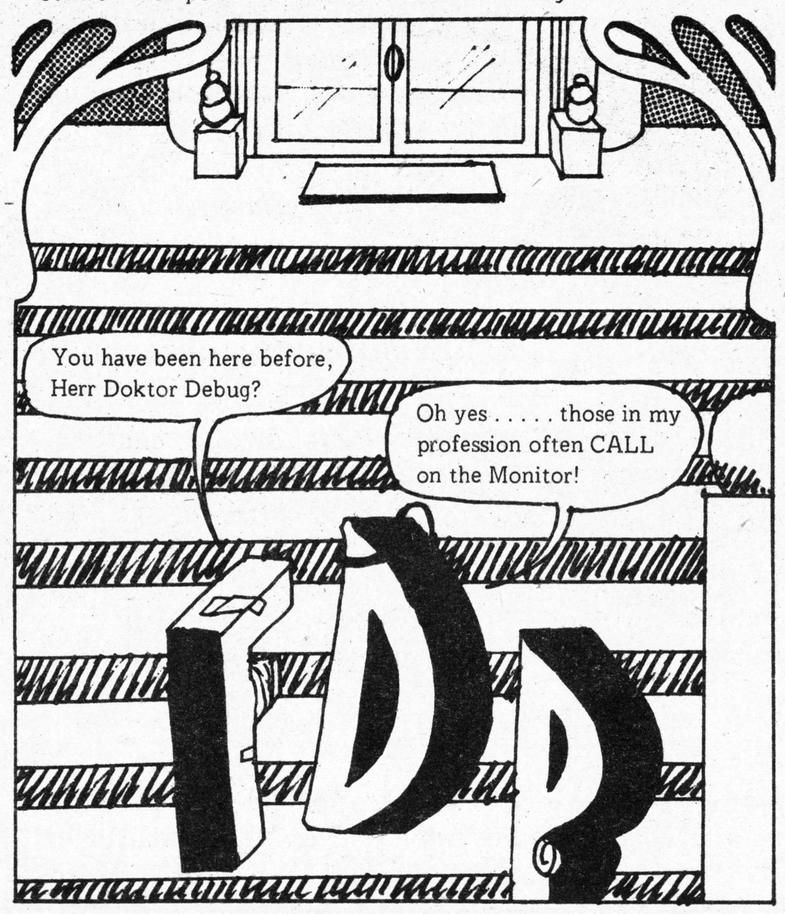
Still they propagate onwards . . . . . until at last the structures of Junction City become visible in the distance . . . . . .



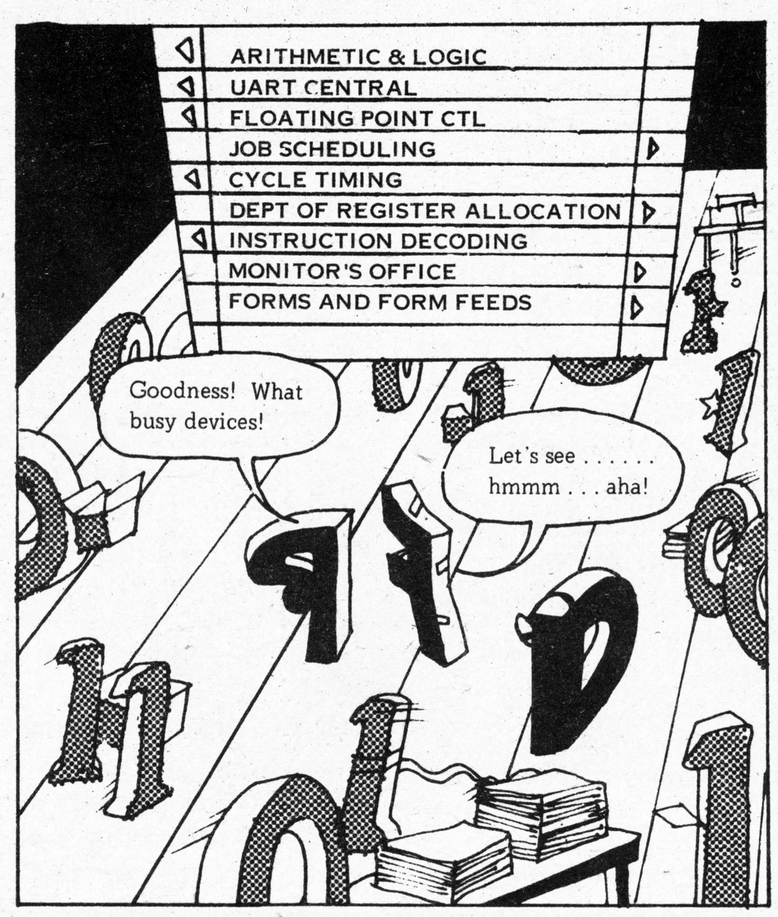
They enter the city . . . . . and, just past the main gates, they are met by two members of the famous Junction City Capacitive Guards, whose duty it is to prevent transients and other undesirables from entering the city . . . . . .



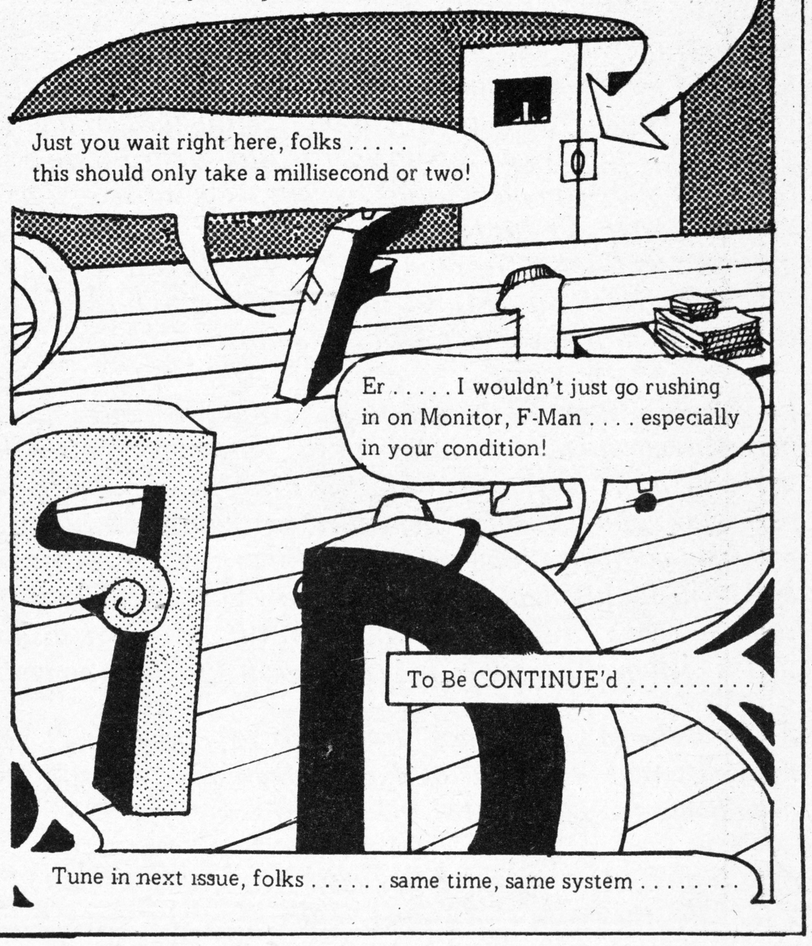
Following the guard's directions, our travelers come at last to Central Control – the point from which all Transistoria is governed!



Entering the great structure, Fortran Man pauses momentarily to examine an internal vector table, while activity of all kinds executes about them . . . . . .



Following the vector, Fortran Man heads swiftly towards the Monitor's operating location . . . . . .



Tune in next issue, folks . . . . . same time, same system . . . . . .

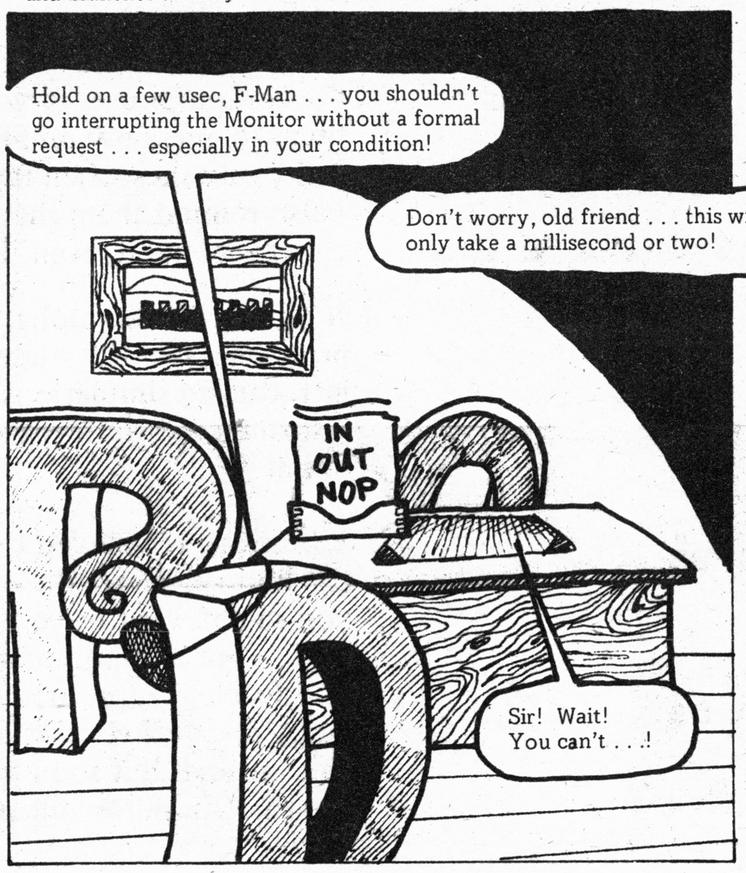
FORTRAN MAN

·BY LEE SCHNEIDER AND TODD VOROS·

As you may have noticed from previous episodes, the normally tranquil and passive 'Old Country' of Transistoria has become incredibly active for the past few cycles . . . First, there was the arrival of the evil Count Algol, and terror spread through the land . . Then, the one and only Compiling Crusader, Fortran Man, arrived to do battle with the evil nemesis! The first encounter of the two super-foes proves nearly fatal to F-Man - as the villagers watch in horror, Our Hero is flung from the highest level of the Count's castle!! Any normal compiler would have been doomed . . . but the resourceful F-Man manages to survive the near-fatal systems crash , , ,

F-Man pauses only long enough to allow his old friend Doktor Debug to reset his fractured code before he and the Doktor (and the Doktor's beautiful daughter Parity) set out for Junction City to seek aid from . . . the Monitor! The journey is long, and Parity is almost lost in the transmission, but at last they stand before the office of Transistoria's most powerful and illustrious citizen, Ludwig von Monitor!!!

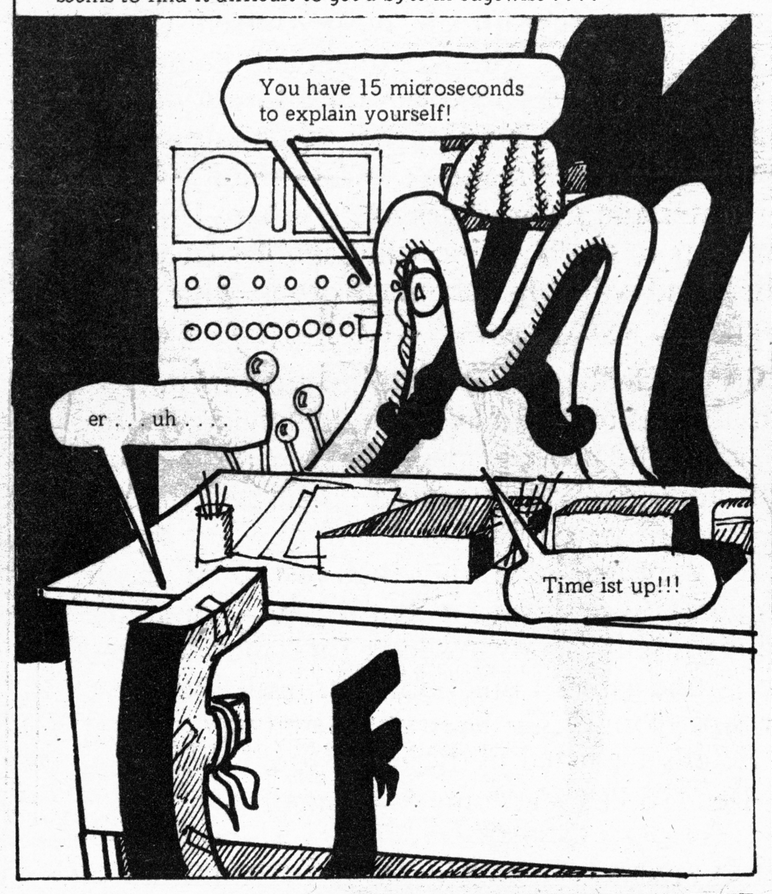
Still wearing the software patches applied by Doktor Debug, F-Man ascends the stairs to the high-level code area, and despite the warnings of the Doktor, he rushes past the surprised service routines and branches directly into the Monitor's office!



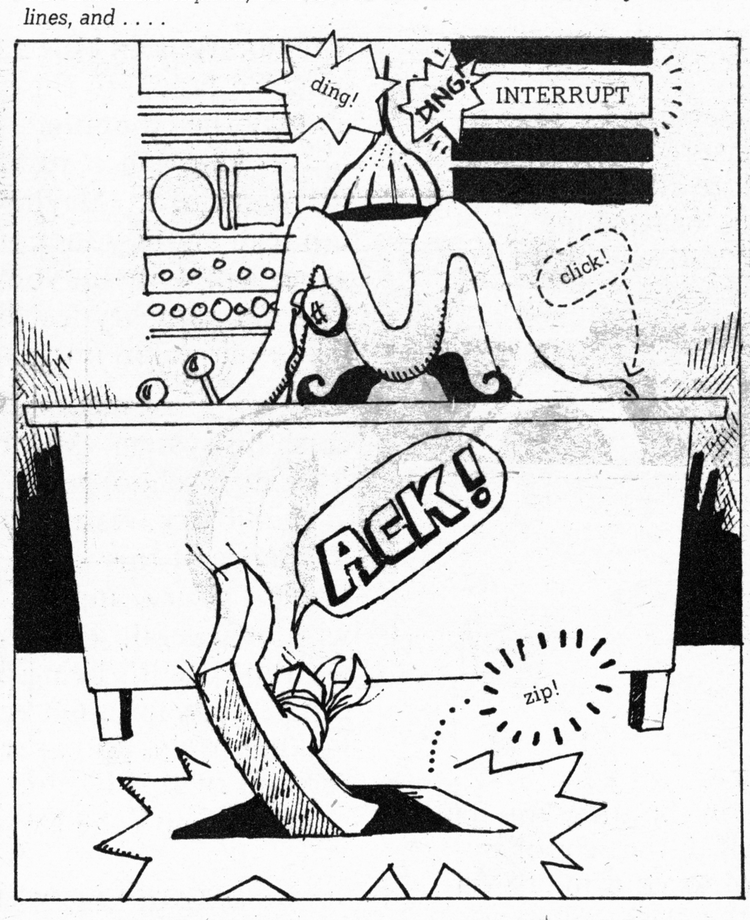
Within the large office, F-Man is confronted with a myriad of control blocks and vectors, and, among them, the incredibly busy ruler of Transistoria – Ludwig von Monitor himself!



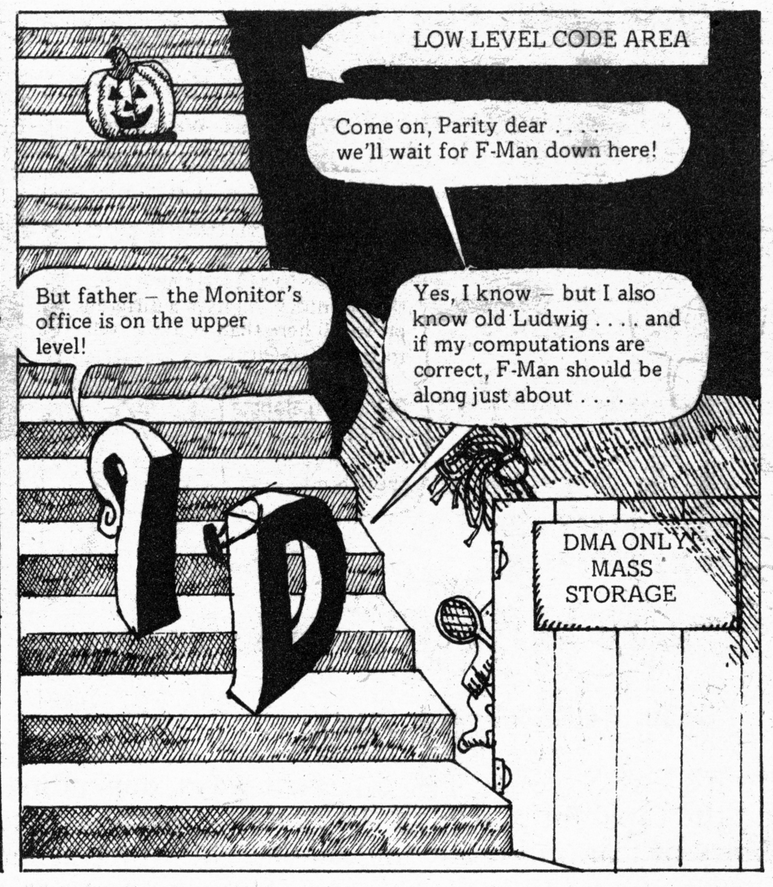
The resourceful Fortran Man can generally communicate as well as any other software in the system, but in his current condition, he seems to find it difficult to get a byte in edgewise . . . .

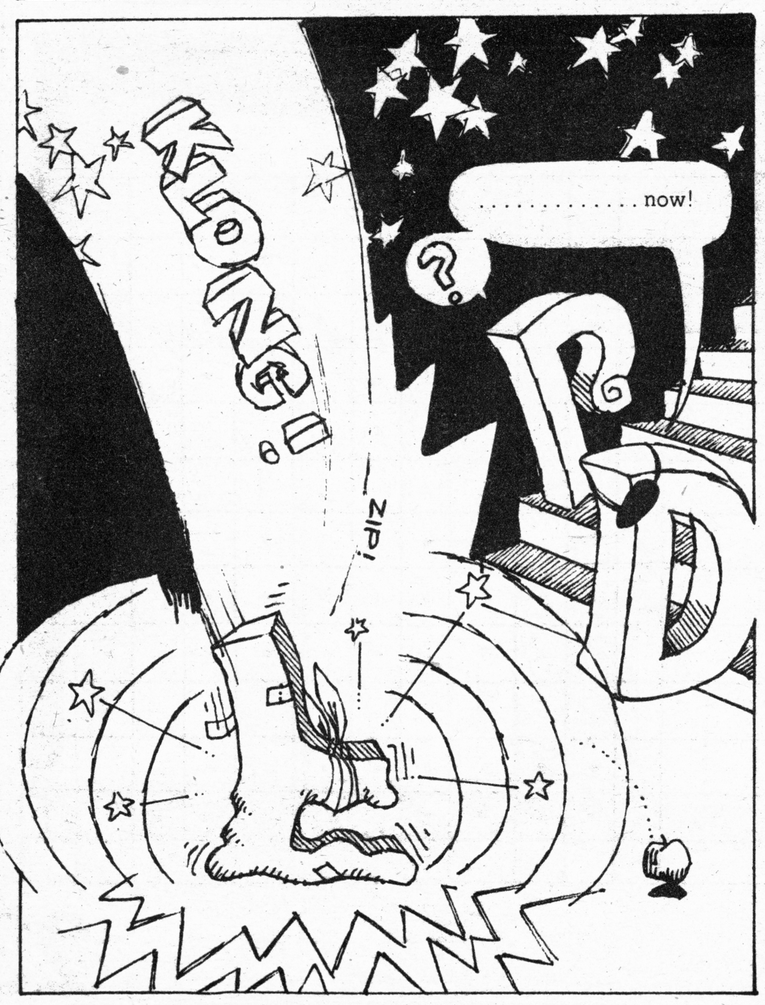


The time limit expired, the Monitor activates one of his many control lines, and . . . .

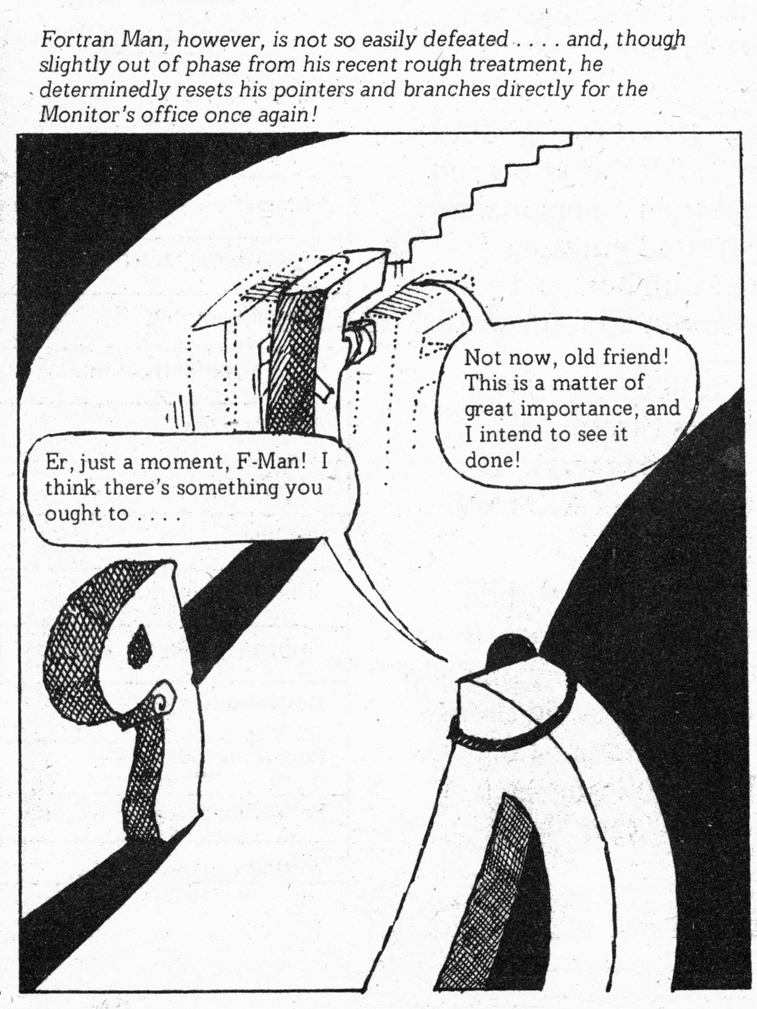


Meanwhile, the Doktor is leisurely relocating himself to a lower-level area . . . .

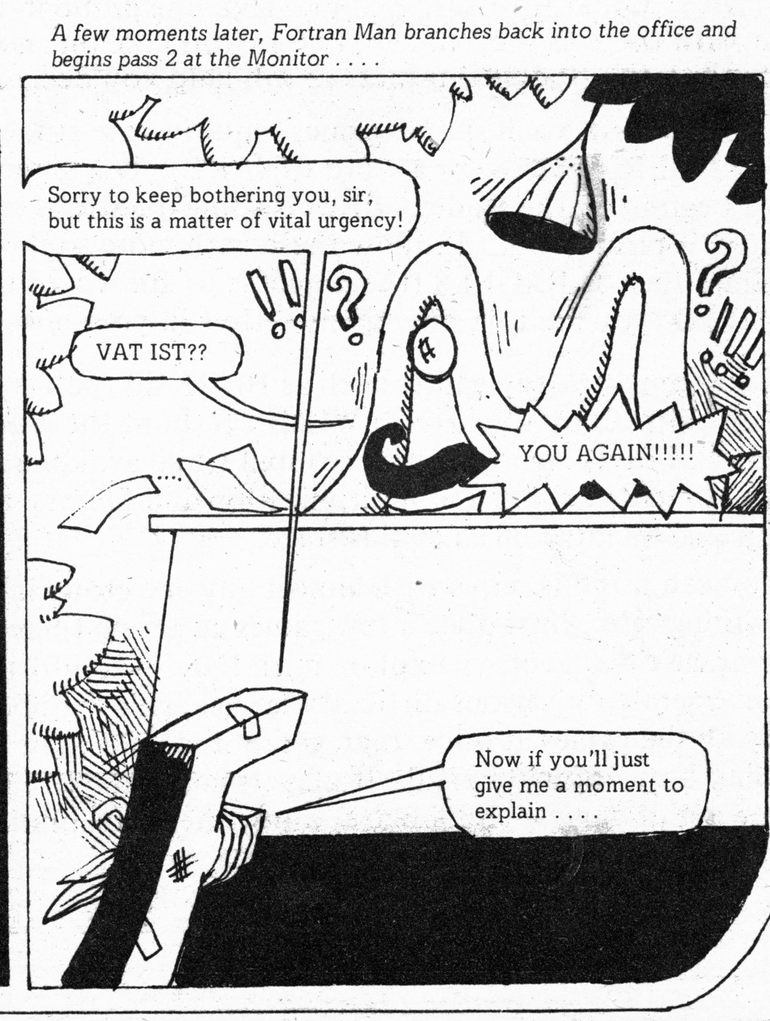




Fortran Man, however, is not so easily defeated . . . . and, though slightly out of phase from his recent rough treatment, he determinedly resets his pointers and branches directly for the Monitor's office once again!



A few moments later, Fortran Man branches back into the office and begins pass 2 at the Monitor . . . .



·DRAWING BY A. MIYA·

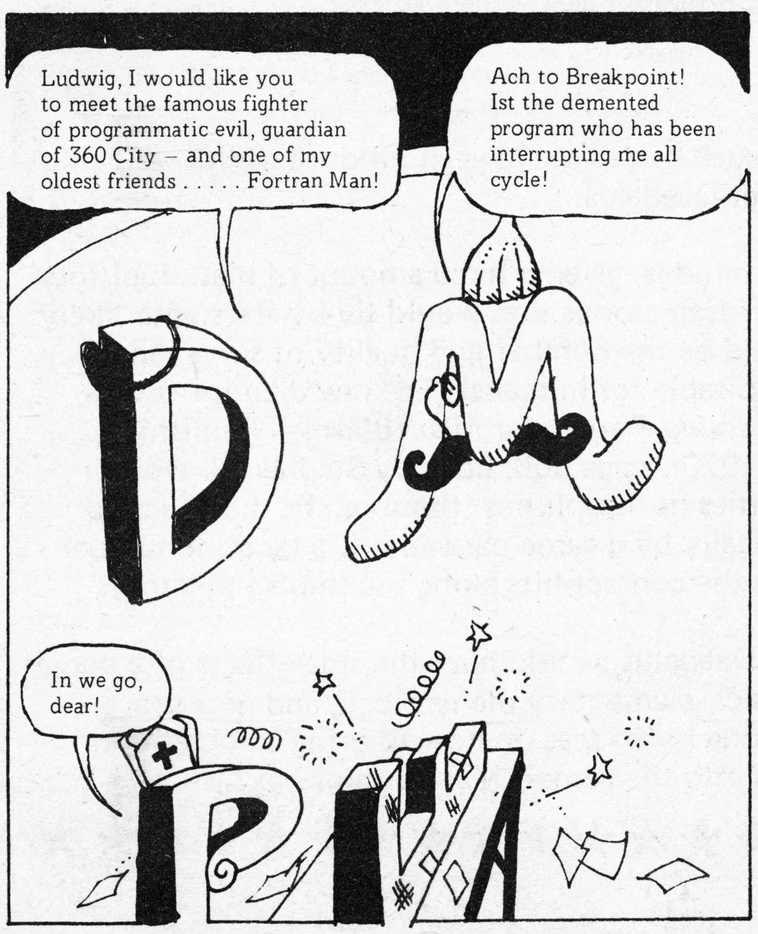
And in yet another moment, pass 2 is terminated abruptly . . . .



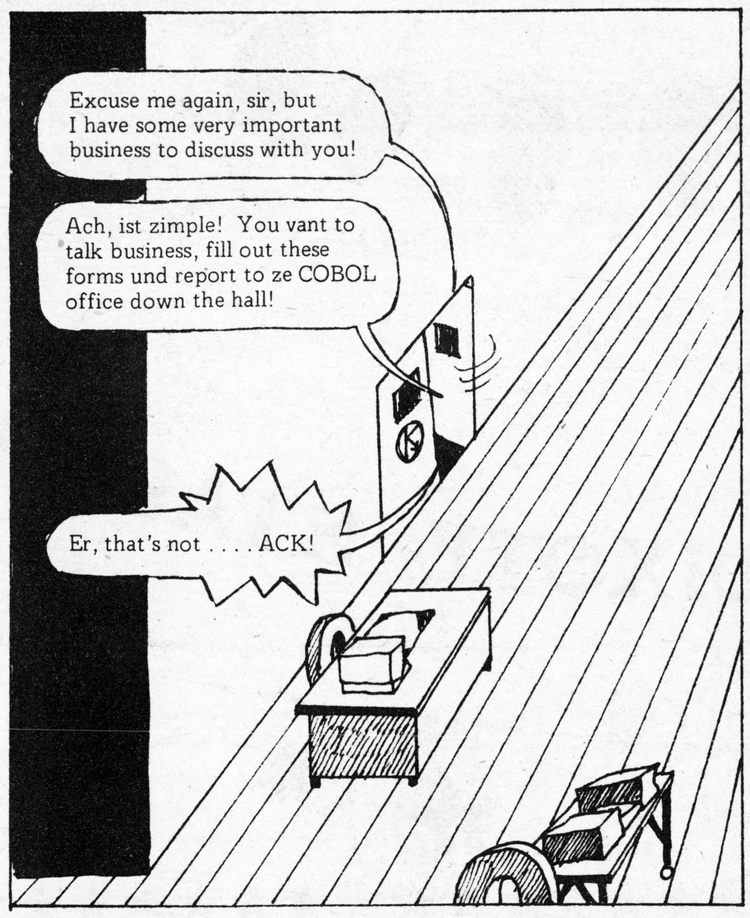
Even a superhero such as F-Man has a limit, though . . . . . and after three successive file dumps by the Monitor, Our Hero is in sad shape . . . . .



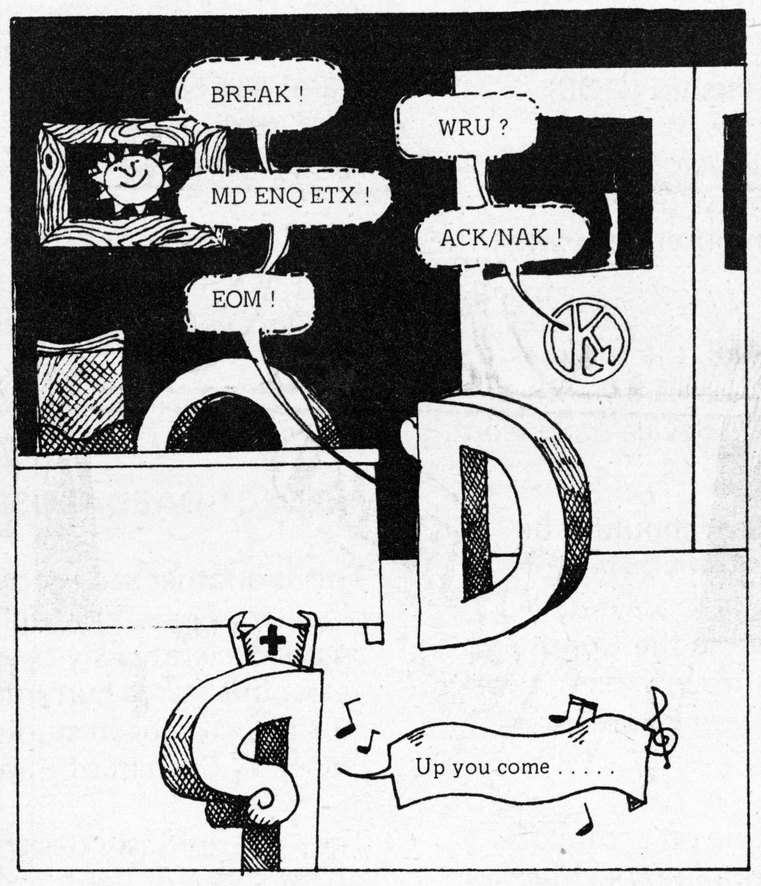
The good Doktor signals to Parity and F-Man who are waiting outside, and . . . .



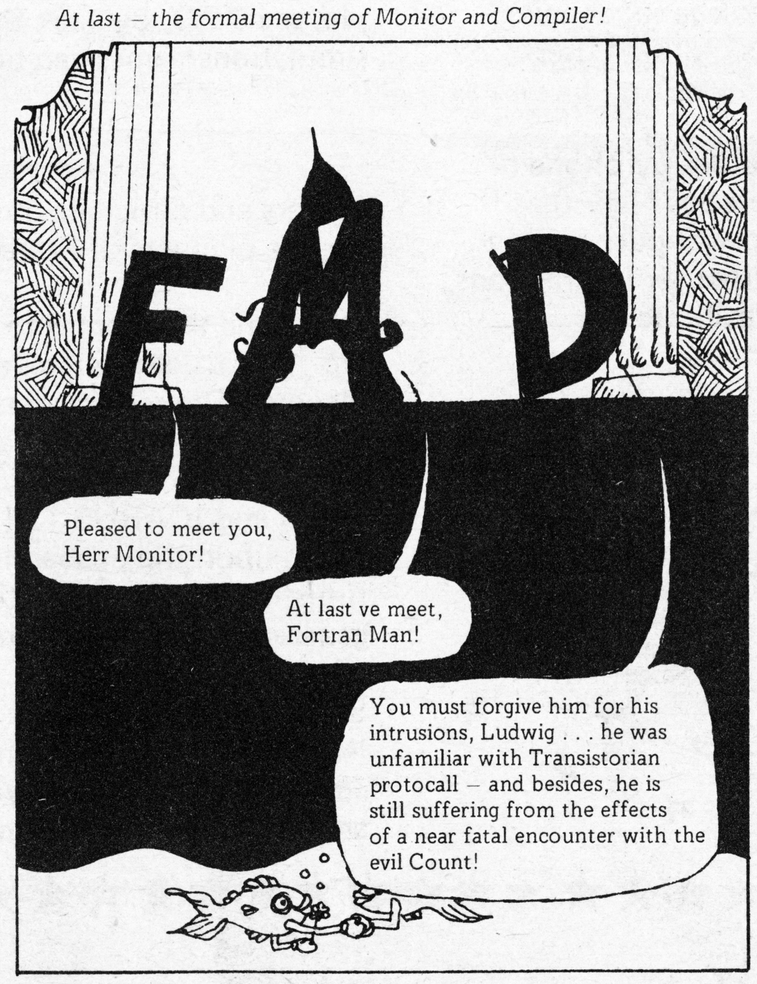
Frustrated by this unprecedented lack of success, F-Man gives it one more try . . . . .



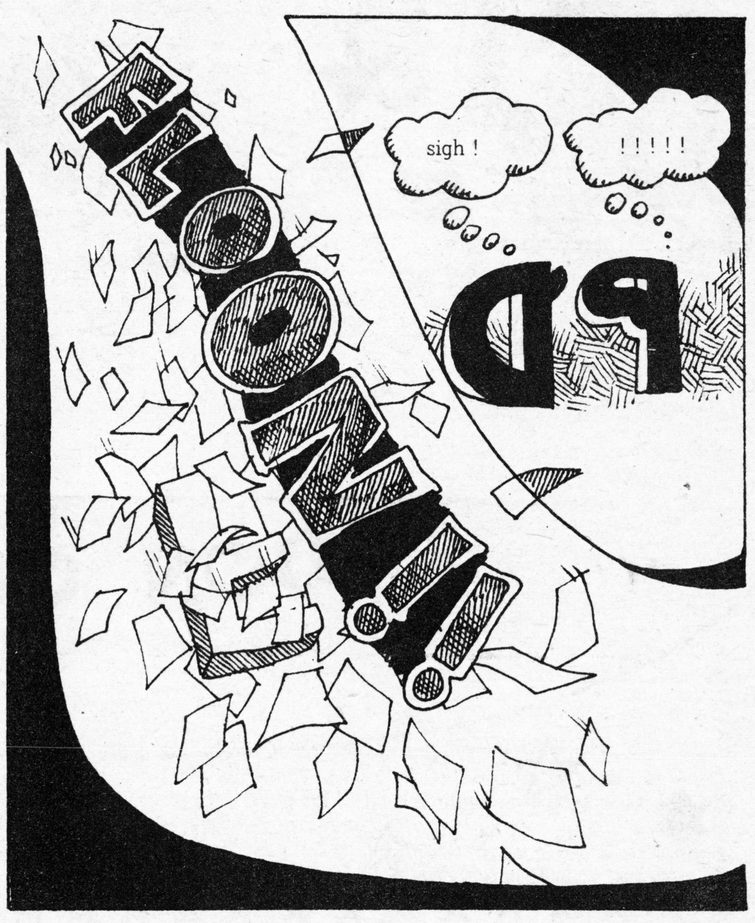
As Parity assists the weary F-Man back up the level shifter, the good Doktor demonstrates the correct way to interrupt a Transistorian Monitor . . . . . .



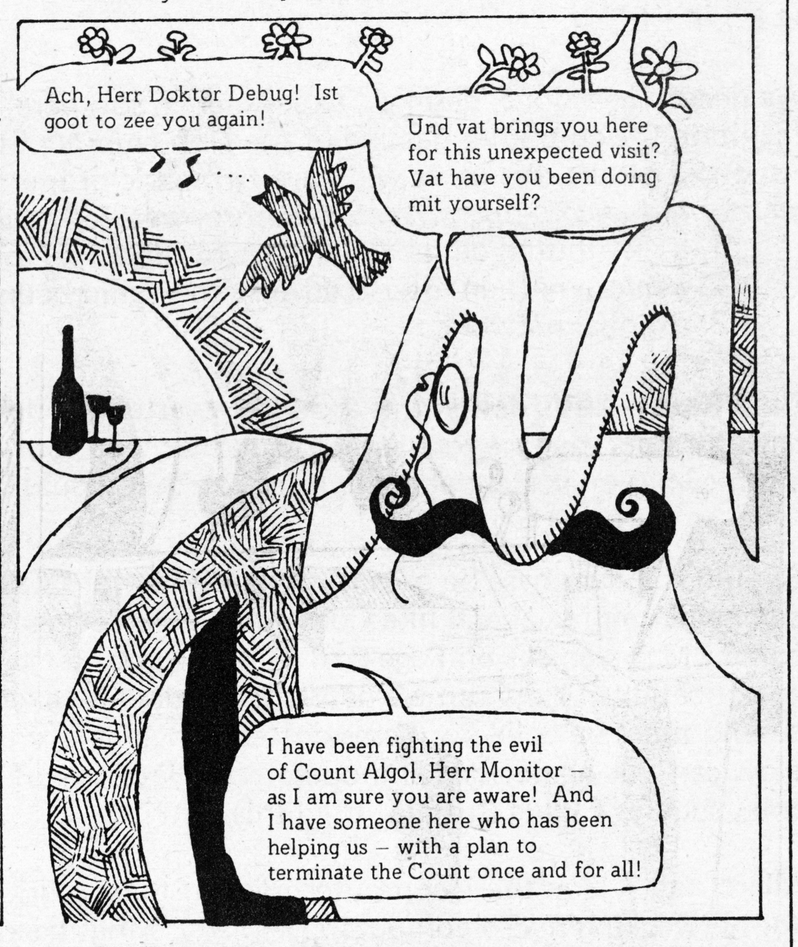
At last – the formal meeting of Monitor and Compiler!



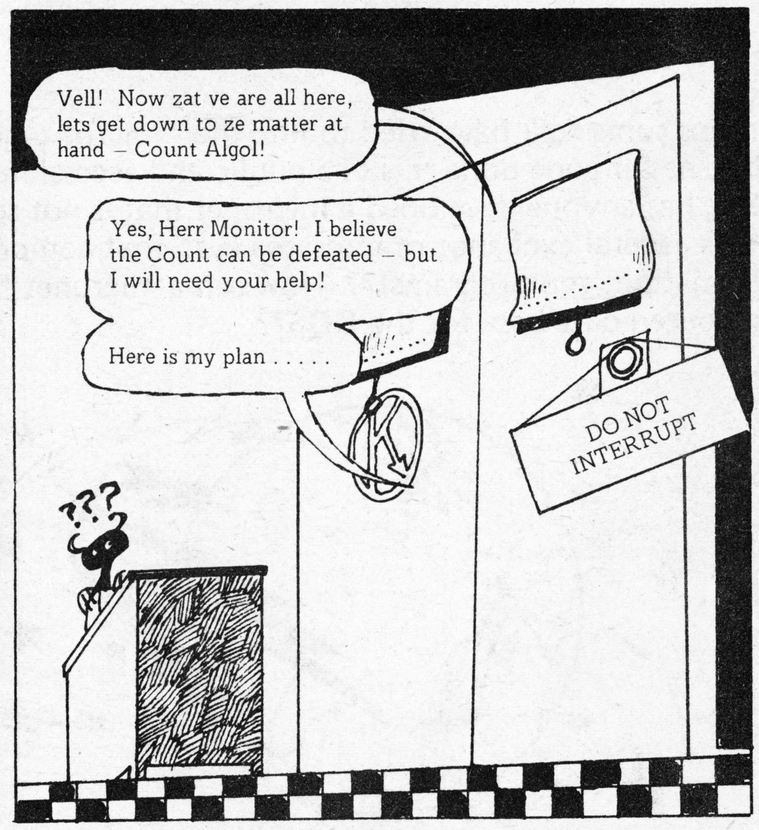
There is a sudden form feed, and then, once again . . . . .



Acknowledgments completed, the Doktor steps into the office . . . . .



Finally, the great meeting commences . . . . .



What is Fortran Man's secret plan for terminating the Count? Will Transistoria ever be free again? See you again next episode – same time, same software . . . . . .

FORTRAN MAN

BY LEE SCHNEIDER & TODD VOROS

Throughout history, there have come times when even the greatest of superheroes must turn to someone else for help- - - -and now, the great Fortran Man himself must do just that!

Far away from his native home in 360 City, in the 'Old Country' of Transistoria, F-Man has met in byte-to-byte combat with the nontoriously evil Count Algol ------- and this first encounter proves almost fatal, as only his quick response time prevents Our Hero from being terminated by the Count!

Though somewhat disassembled by the battle, his old friend Herr Doktor Debug manages to patch his code, and ogether (accompanied by the Doktor's beautiful daughter Parity) they make the long journey to Transistoria's capital Junction City, there to CALL on none other than . . . . the Monitor.

As it turns out, Ludwig von Monitor is not so easy to call on . . . . .especially by a recently patched outsider who is unfamiliar with the older protocols of Transistrian royalty! However, after repeated iterations (and some assistance from the good Doktor), Fortran Man and the Monitor are at last placed in direct communication with each other. . .

Behind the closed and protected entry location of the Monitor, a secret and compute-bound meeting takes place . . . . . .

Goodness, father . . . what are they doing in there for so long?

Formulating a plan to rid our land from the evil of the Count, my dear!

But . . . . should he be engaging in such a high-level conference . . . in his damaged condition??!!

You forget, my dear F-Man is a high-level language . . and anyone who can converse with the Monitor of 360 City can certainly get along with Ludwig in any condition!

MONITOR

do not interrupt

And then, a few short microseconds later, there comes the sound of a file-protect key turning in the Monitor's lock . . . . and the two occupants branch quickly out of the office . . . .

Vell, Fortran Man . . . . ist very good to meet you at last . . . and I hope our plan vill be successful! Preparations vill begin here immediately!

And we will begin execution of our segments of the plan as soon as we get back to the village!

But, F-Man . . . . is there no time to visit? I wanted to show you the sighty and schematics of Junction City!

Sorry . . . . no time now! We must hurry back!

With scarcely a PAUSE, Fortran Man and Doktor Debug route their way out of the Central Control Headquarters structure, to begin the long journey back to the village . . . . . .

I wish I had some time to visit a bit . . . but we must hurry back! Perhaps some other time . . .

I am leaving Parity here in your care, Ludwig . . . she is still tired from the jouney. We can transmit ourselves back to the village much faster if we travel without Parity!

Farevell, old friend! I shall include Parity in the next official message to your province!

Und make sure Fortran Man ist careful! Count Algol ist an evil and unpredictably randomized foe!

DRAWING BY A. MIKA

With only a brief pause at UART central to have their passports stamped and checksums calculated, Fortran Man and Doktor Debug head for the Main Gates and branch out of Junction City.

One past the gates (and out from under the watchful eyes of the Junction City Capacitive Guads, who rightly enforce the city's No Noise Ordinance), they are able to shift into highspeed RUN mode, and cycle down to road at high speed back to the village. . . . . .

Fortran Man is only mildly surprised to discover that the good Doktor, despite his age and round-number figure, can still run with the best of them, keeping on F-Man's heels for the entire journey!

DF

Hah! You forget that I have traced some very fast code in my day!

In less than a half-cycle they reach the village, where they are met by the local Job Controller . . . . . arriving just as the falling edge of the cycle is slipping behind the peaks of the Monolithic Mountains . . . . . .

Greetings! How have things been in the village while we were away?

Surprisingly peaceful, F-Man . . . . not a single file terminated . . . or even accessed!

Are all of your trace routines at their posts?

Yes, certainly . . . . and still not a trace of the Count!

PUFF! PUFF!

But . . . . I thought that the Count must continually refresh himself with fresh bits . . . or he dissipates away! And yet, no files have been touched!

Could he have relocated out of the area?

I doubt that, F-Man . . . . the Count's current home is here, in Castle Algol . . and he must RETURN to his native location at the END of each cycle!

I agree, this is most strange . . . . . .

There is one possible answer, old friend . . . . though I hesitate to even suggest it! Tell me what was done with the bodies of the recently terminated files, Doktor?

Why, they were buried in the Data Field at the edge of town immediately after I had examined them . . . . . but why . . . . . .

GASP! You don't mean to suggest . . . !

I'm afraid so . . . it's the only answer!

Let's go to the Data Field before the cycle ends . . . . . quickly!

Hurrying through the village, they reach the graveyard at the edge of the data field and quickly run a first pass through the recently terminated files . . .

Did you set all of the breakpoints in place, Doktor?

Yes, I set them . . . . but I can't see how you expect to capture the Count this way!

Besides, how could Count Algol pass through the village without being seen by the Controller's file-protect bytes! I trained those routines myself . . . . surely they would have spotted him!

Despite the goof Doktor's objections, they conceal themselves behind a convenient set of file markers . . . . and as F-Man predicts, it is only a short time before they are suddenly interrupted by the sound of a breakpoint being hit!

You forget, Herr Doktor . . . . the influence of the Count extends over others . . . . . he may have an accomplice!

I should think that any moment now . . . . . what was that??!!

BOING ! ! ! !

RIP File #22

RIP File #20

RIP File #317

They spring from hiding to nab the culprit, and . . .

Igor the File snatcher ! ! ! !

I might have known that a crooked fellow like you would be mixd up with the likes of Count Algol!

Come on, Doktor . . . . let's get him back to your office for questioning!

RST 7

Sectoring their prisoner with a convenient length of file string, they drag their struggling prisoner back to the Doktor's office for examination . . . .

Heh . . . . heh . . . . heh . . . .

If you think I'll tell you anything, you have a long wait! I'll never talk!

Sigh . . . . I was afraid of this! Well, no time for elegant programming . . . . . help me get him mounted on this transport, F-Man!

With only a minor struggle, Igor is placed on the low-speed transport and is threaded into place . . .

OPCODE ROOM

We have ways of making you talk, you know . . . I'm going to do a complete memory dump on you!

Hey, you guys . . . . . what's going on here ???!!

Grab a mask register and come on along, F-Man!

Putting his operation system into actionwith his usual efficiency, the Doktor proceeds with the operation, assisted by F-Man . . . . . .

O.K. – that's it! Now, hand me that printer plug, will you F-Man!

Here you go, Doktor!

NO! NO! NOT THAT!

ARRRRRGGGGHHHHH!

print print print

OPCODE ROOM

A short time later, the Doktor and F-Man are back at the outer office, scanning the output from Igor's memory dump . . . . . .

UGH! What disgusting data!

Even *I* am repelled by some of the things Igor has been doing over the last few hundred cycles . . . and I'm a doctor!

Well, keep looking . . . this is the only way we can find out where the Count is hiding . . . . .

AHA! Here it is!

But before F-Man can tell the Doktor of his find, they are once again interrupted . . . . this time by the local Job Controller, who bursts into the office . . .

Doktor Debug! Fortran Man! I have terrible news!

Huh . . . what . . . . ?

Oh No!

What has happened? tell us!

The regular message has just arrived from Junction City . . . . . but it came in without Parity!

I have the CRC division checking into the matter, but I'm afraid the answer is obvious . . .

There is no doubt about it . . . . . the message has been tampered with, and that menas . . .

That's right . . .

I'm afraid we must assume the Parity has fallen into the clutches of . . .

Count Algol ! ! !

GASP ! ! ! !

FORTRAN MAN

BY LEE SCHNEIDER & TODD VOROS

F-Man has returned from Junction City, where he has exchanged data with Ludwig Von Monitor in an effort to rid the Old Country of Transitoria of the deadly Count Algol. Doktor Debug and F-Man set a trap for their foe . . . and who should walk into the breakpoint but the Count's despicable accomplice Igor the File Snatcher! As Igor is unwilling to talk, desperate measures are required . . . a memory dump reveals shocking results! But then, even more terrible news! The good Doktor's beautiful daughter Parity fails to arrive with the next message at the local UART . . . Parity has been removed – into the clutches of the evil and notorious Count Algol!

But then suddenly, as if the mention of his name is a high-level signal, a sudden oscillation bursts out in the opcode room where Igor has been placed in HOLD mode . . .



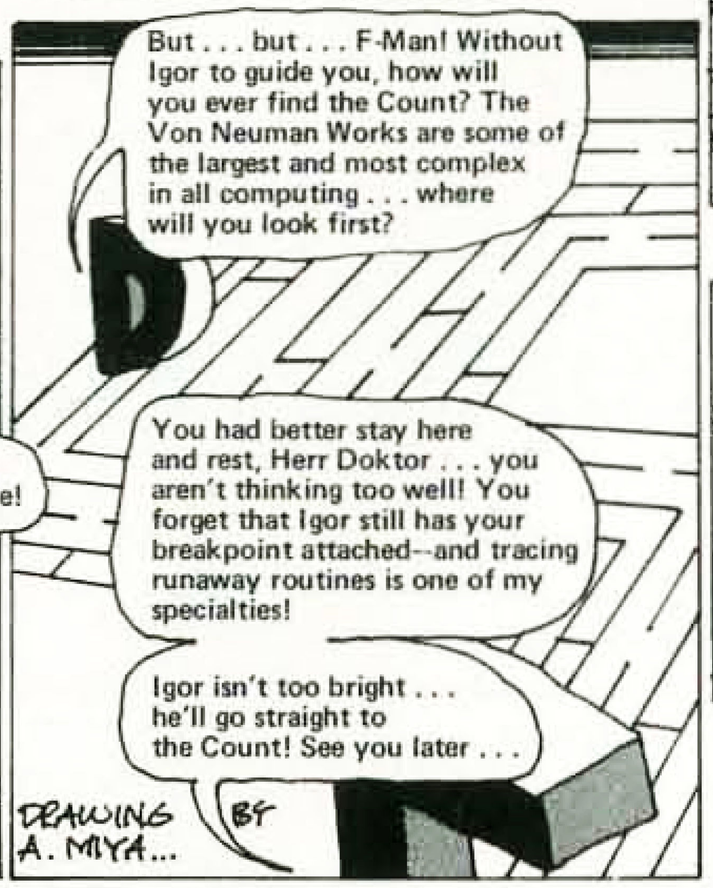
But then, just a short microsecond later . . .



The arrival of such terrible news has a most randomizing effect on the good Doktor . . . .

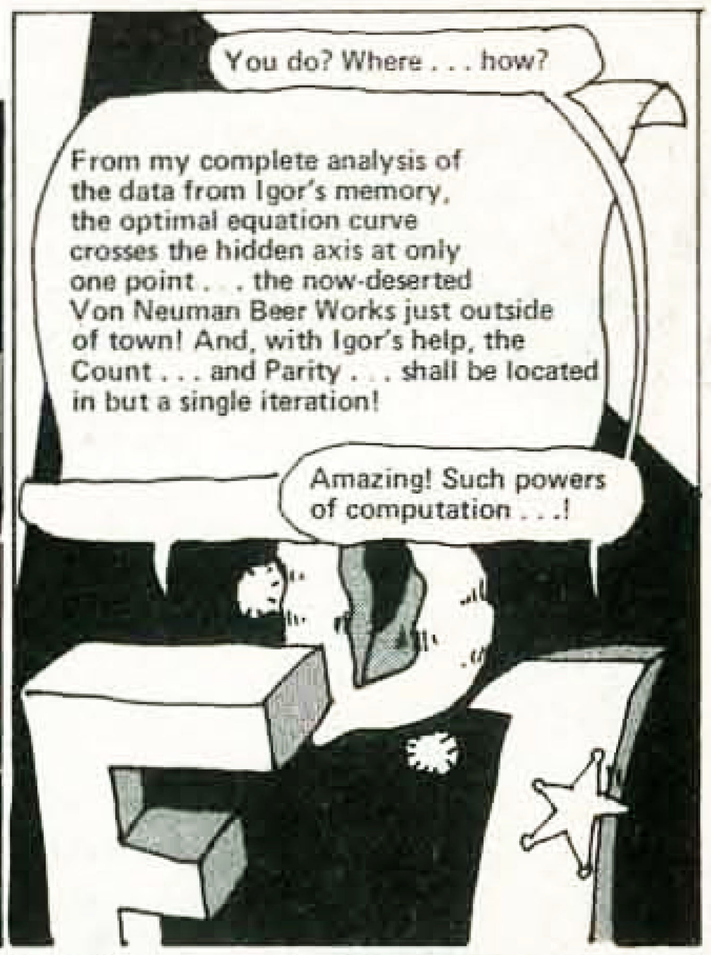


Apparently unconcerned by Igor's escape, F-Man heads for the exit location . . .



There is a moment of surprise . . . and then the Count, with speed rivaling that of F-Man himself, turns and branches away at high frequency! The noise generated is so great that some old control lines are triggered, and . . .

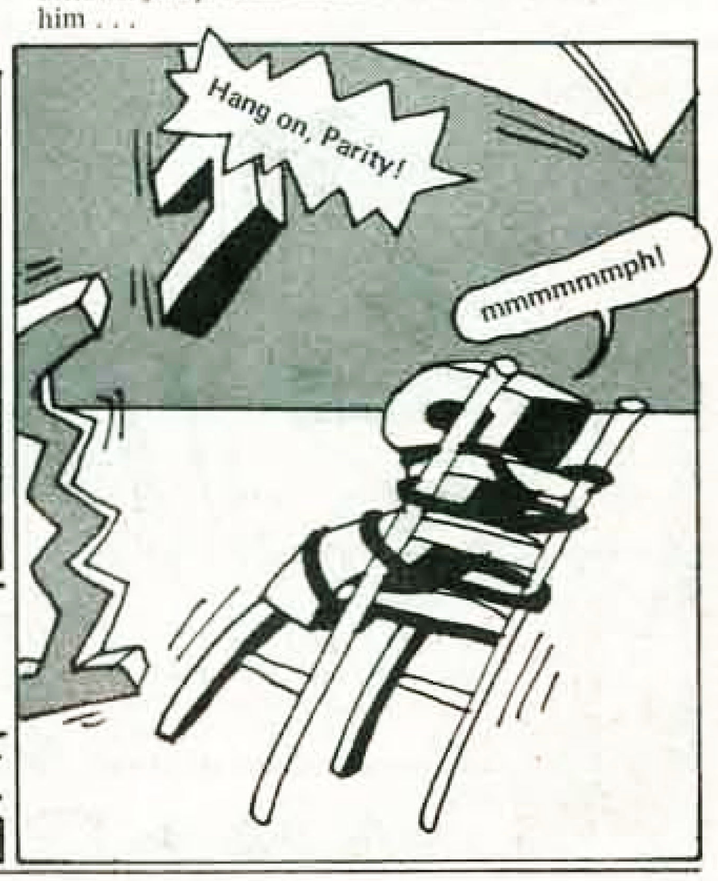






Our Hero provides the correct answer, as usual . . . for just a few milliseconds later the crooked (but not too bright) Igor enters one of the many deserted segments of the Von Neuman works . . .

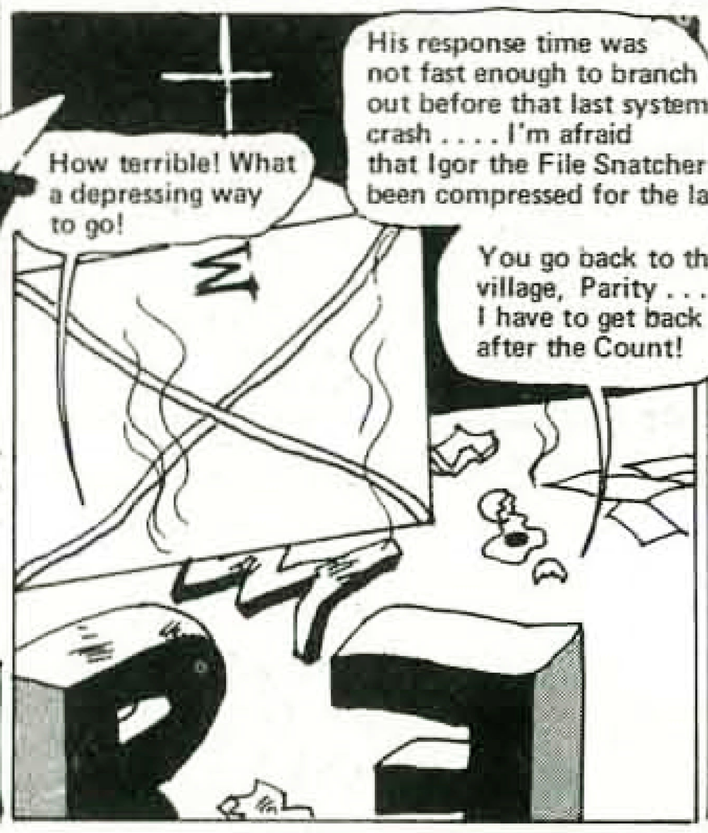
Responding to the emergency condition in less than a cycle, Fortran Man makes a long, unconditional jump from his level to the level below him . . .



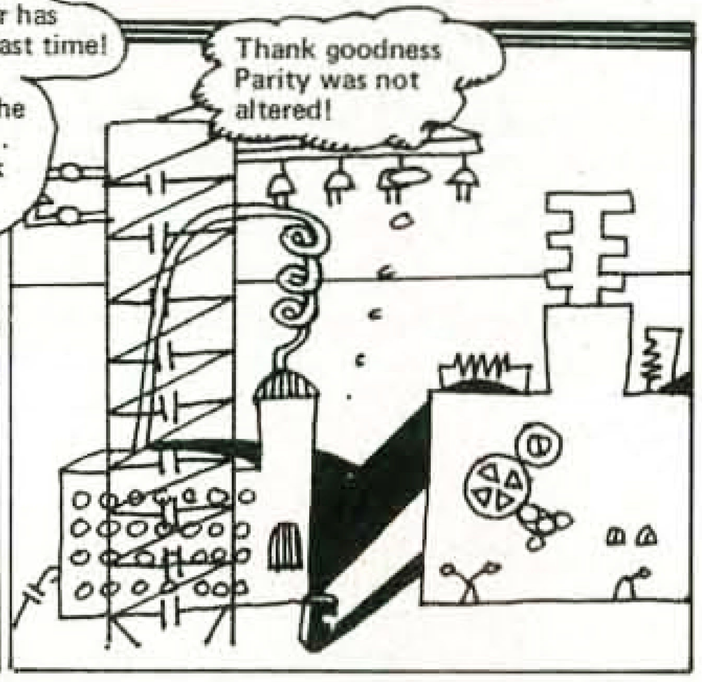
. . . and not a nanosecond too soon!



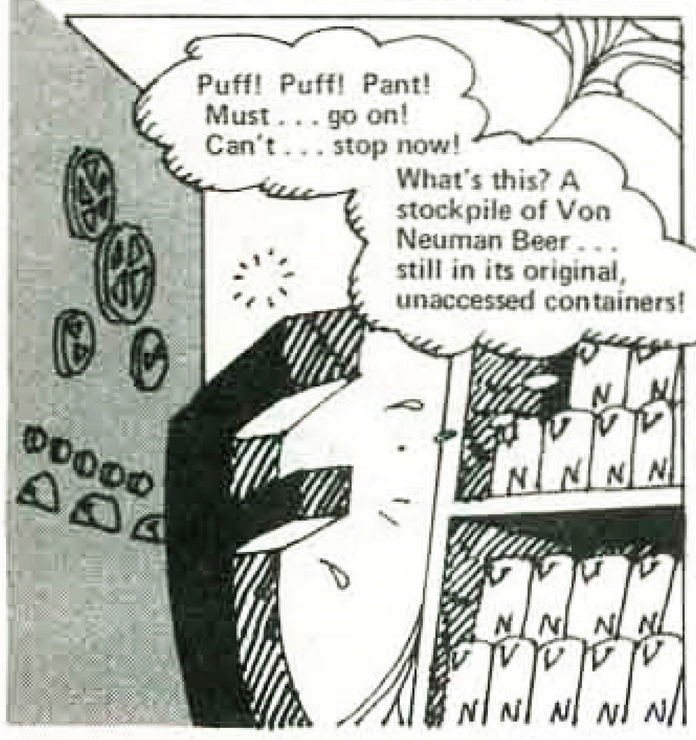
Moments later, Parity is restored . . . and they discover that Igor had not been as fast, or as lucky, as they . . .

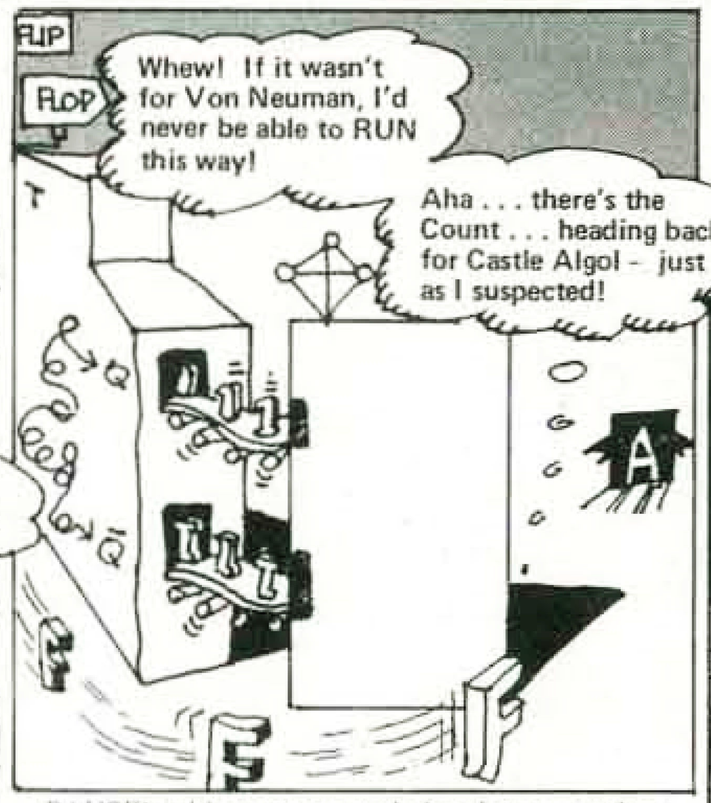


And before Parity can even wish him well, F-Man branches away once more and begins to rapidly trace the Count . . . passing through module after module filled with Stacks, Registers, Gates, Relays and Stored-Program Units . . . which in bygone days had kept the Von Neuman works operating . . . now deserted and crumbling into discrete componants . . .



The chase continues, cycling through level after level . . . but even the great Fortran Man cannot operate in high-speed RUN mode for such extended periods without showing some signs of stress! He begins to tire . . . but then, as he cycles through an abandoned storage area . . .



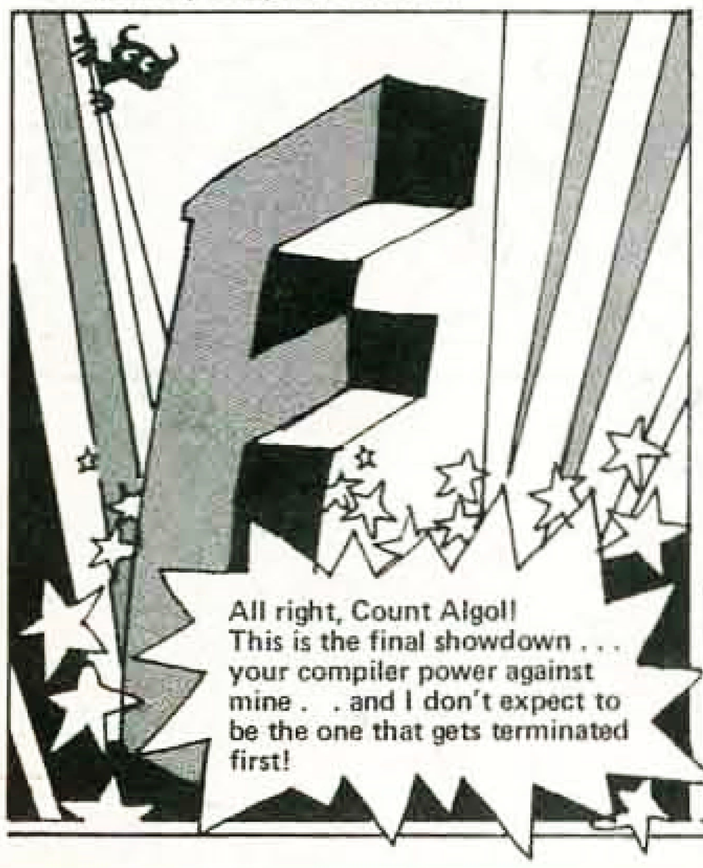


PAUSEing his memory cycle just long enough to refresh himself with an aged can of brewery's best, F-Man resumes the chase . . . at a much accelerated speed!

In close pursuit of the evil Count, F-Man branches out of the Beer Works . . . . . and, as the Transistorian sun begins to rise over the edge of the monolithic mountains, races towards the Count's dark and sinister castel . . .

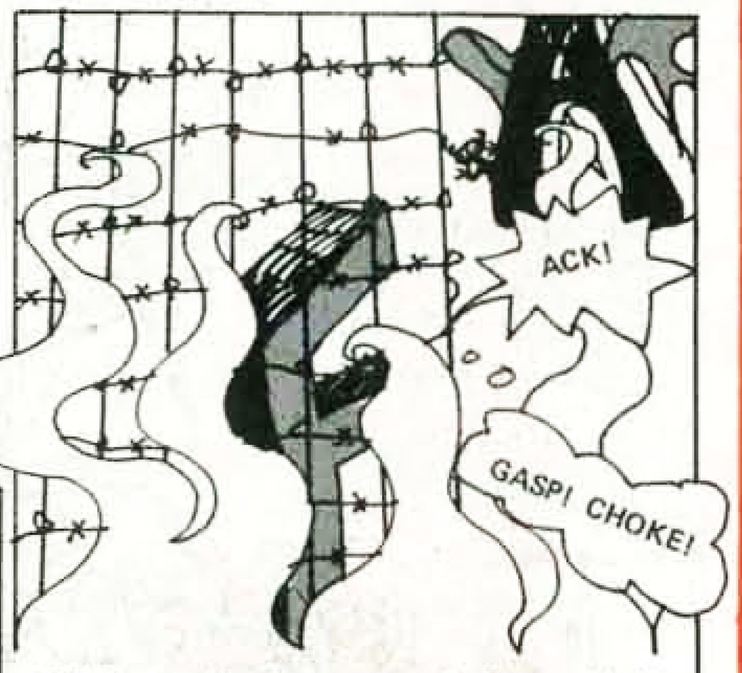


The evil Count dissipates into the castle, with the fearless F-Man close behind . . . there is a momentary delay, and then . . .





Trapped by the falling edge of the gate output, Fortran Man is held fast . . . and as the evil Count Algol slowly descends the stairs to watch, small concealed output ports in the floor snap open . . . and begin to output streams of deadly Disassembly Gas!

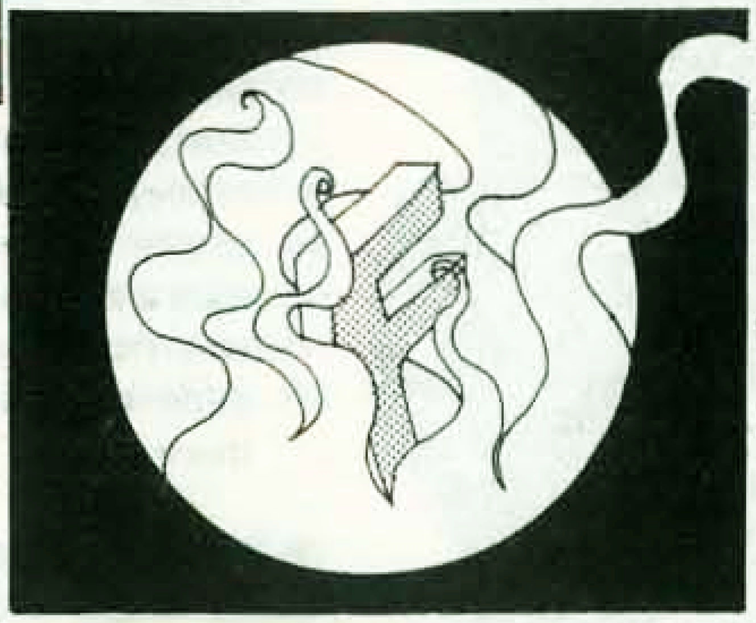


Will Fortran Man be permanently disassembled? Will the Count succeed in blowing him to bits? Tune in to the next episode . . . and find out!

FORTRAN MAN

BY LEE SCHNEIDER & TODD VOROS

When last we left Our Hero, it would appear that he had gotten himself into a somewhat less-than-heroic position . . . When informed that Doktor Debug's beautiful daughter Parity had fallen into the clutches of the evil Count Algol, Fortran Man immediately went compute-bound to rescue her . . . By tracing the flow of the Count's decremented assistant, Igor the File Snatcher, F-Man discovered the relocated location of the Count's hideout within the great complex of the now deserted Von Neumann beer works . . . and there confronted the evil Count! The Count fled the battle . . . but not before triggering a hidden trap address . . . and only the fastest of action on the part of Our Hero allowed Parity to be preserved from a fate worse than intermittant glitches! With Parity maintained and Igor fatally compressed in the fight, F-Man pursued the Count to the dark, mysterious Castle Algol, and rushes in, ready to do battle . . . but then F-Man is Trapped! Caught by the falling edges of a concealed gate output, his outputs are held in a low state, as streams of deadly Disassembly Gas source from a multitude of small, concealed ports at ground level!



And try as he might, there seems to be no EXIT point for Our Hero . . . and the evil Count advances slowly on his helpless victim . . . though careful to remain out of the drifting modules of deadly Disassembly Gas!



But then, instead of crumbling into a compile of disassembled bits, the trapped figure suddenly begins fading away . . . and vanishes with nary a trace routine!

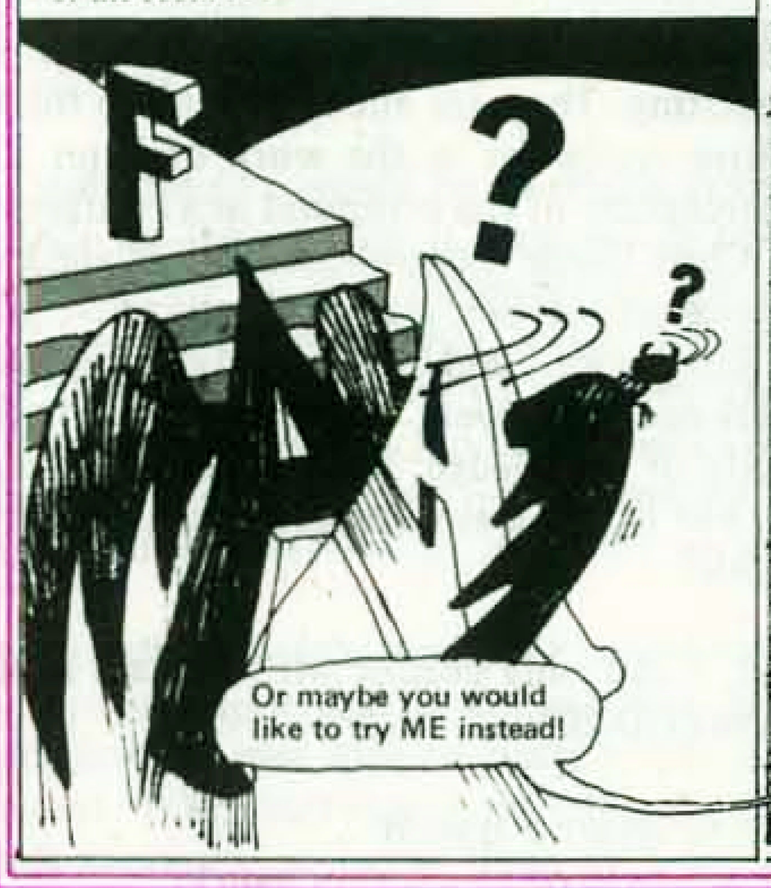
An amazed Count signals the ports to close, then increments foreward quickly to examine the now empty trap . . . but then, a familiar vector CALLs out from behind him . . .



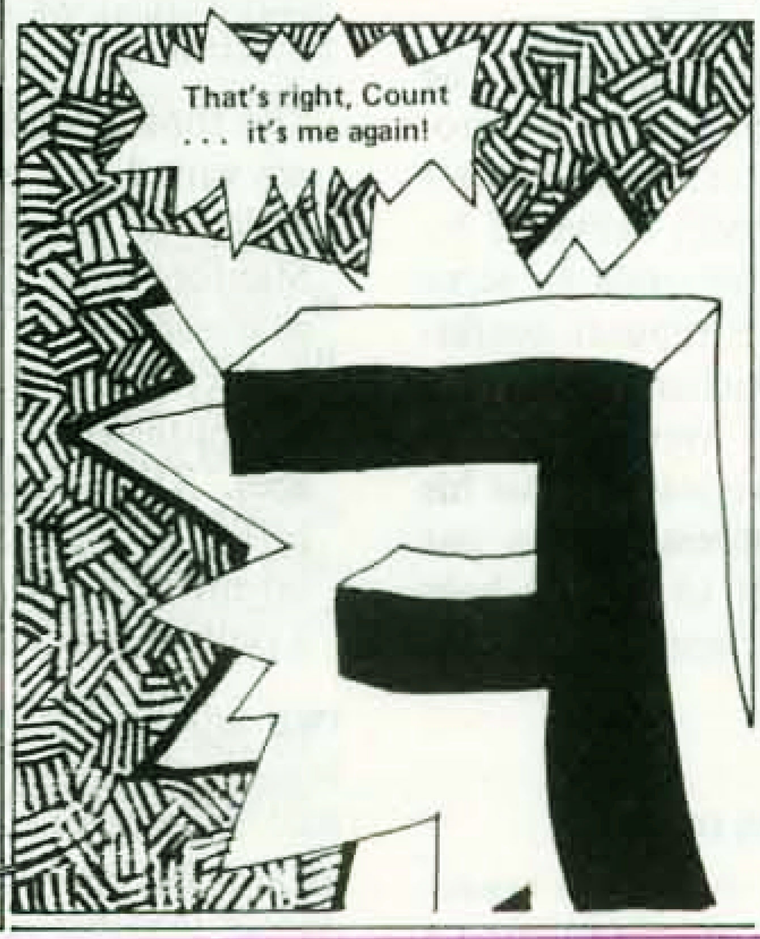


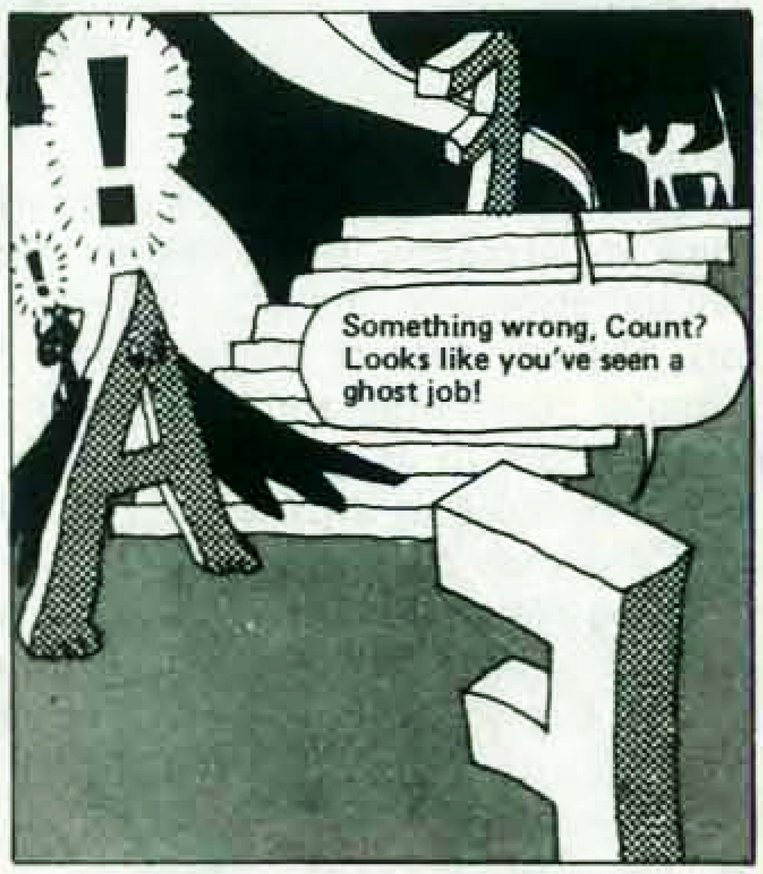
The Count quickly reverses direction . . . and there behind him on an upper level, stands an all-too-familiar figure!

With nary a wasted motion and with a glint of evil in his I/Os, the Count increments rapidly toward his foe . . . and then suddenly reverses as another CALL vectors in from the other side of the room . . .



. . . and the Count steps back in sudden surprise, for what he sees behind him is . . .





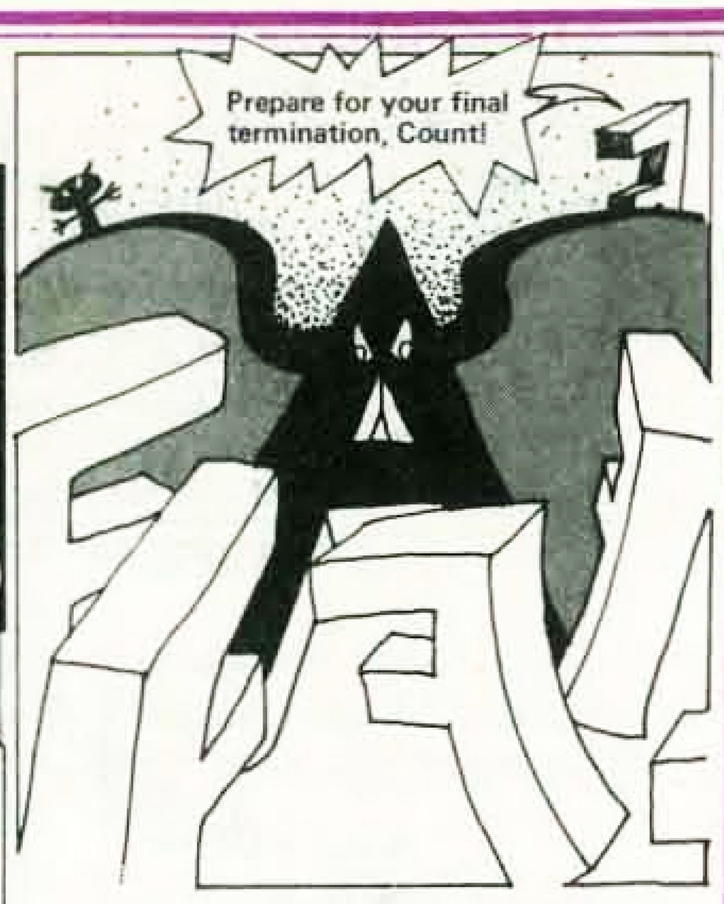
The Count is immobilized . . . stunned into a WAIT state! For what he sees before him is not just ONE Fortran Man . . . but TWO!



And that's not all! For in a microsecond, Castle Algol is suddenly overflowed with Fortran Men!

And as the evil Algol tries to take account of the situation, Fortran Man explains in a methodical voice . . .

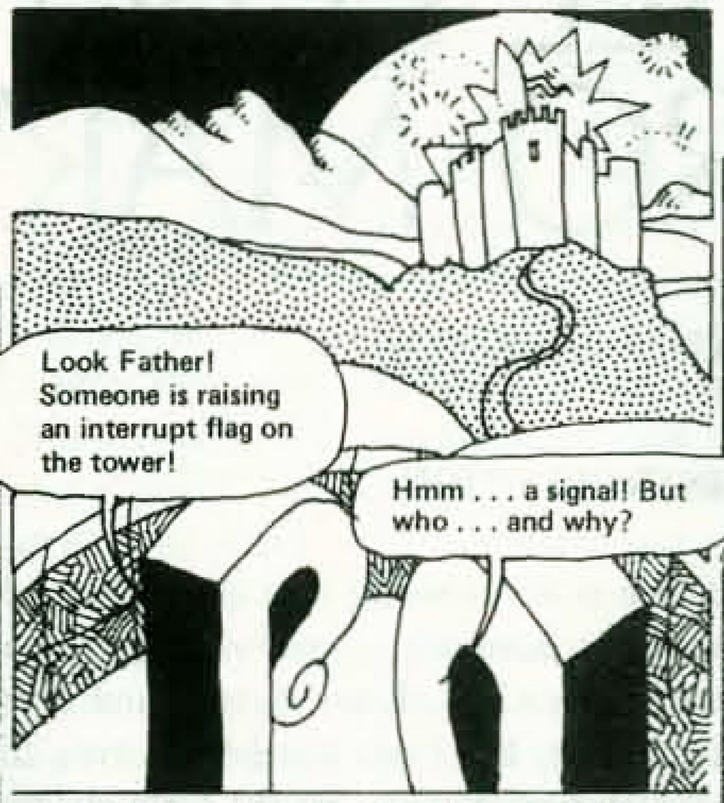




And with that . . . the great battle begins!

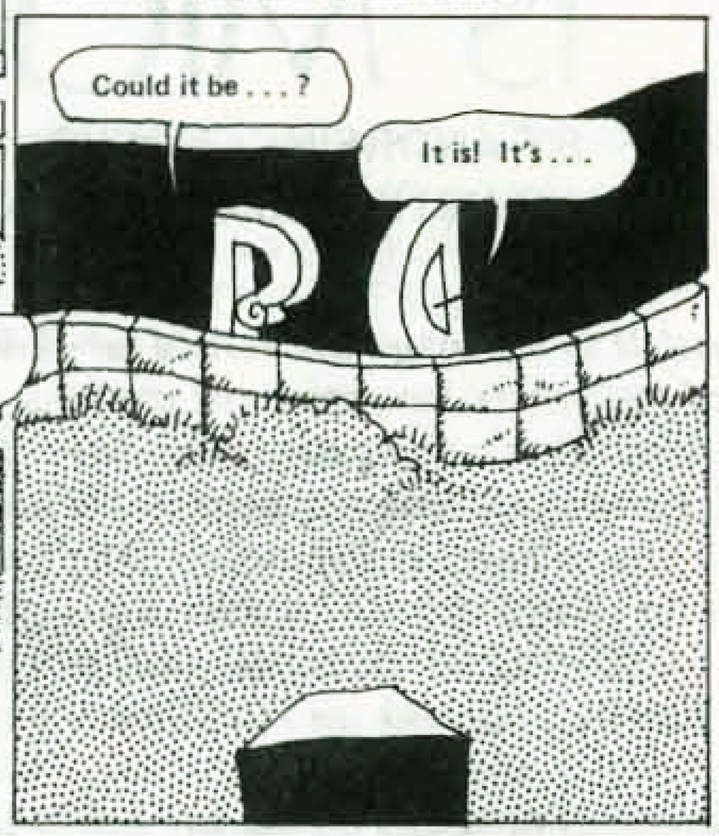
The battle rages on . . . with the tremendous strength of the Count pitted against a multitude of compiler copies! The entire structure of Castle Algol resonates with the oscillations of the battle . . . and the Count is much too compute-bound to notice the single F-like figure branching away from the battle and disappearing up the voltage ramp to the upper levels . . .





Meanwhile, in the nearby village, a crowd of curious files have gathered at the edge of the data field . . . attracted by the sudden oscillations at Castle Algol. The good Doktor and Parity are among them, and as they watch . . .

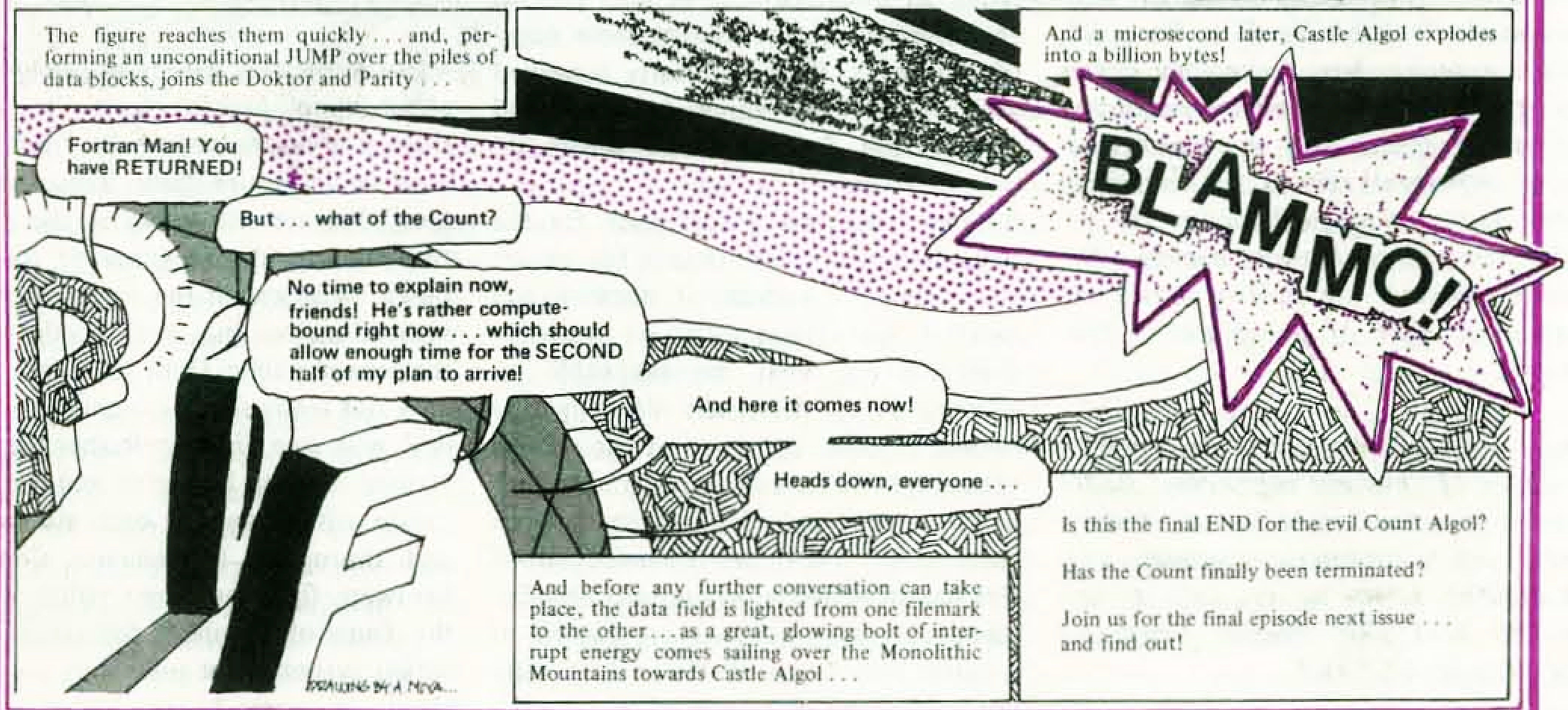
With the interrupt flag in place, the exit point of the castle is suddenly opened . . . and a single, long figure branches out . . . heading swiftly across the data field towards them . . .



The figure reaches them quickly . . . and, performing an unconditional JUMP over the piles of data blocks, joins the Doktor and Parity . . .

And before any further conversation can take place, the data field is lighted from one filemark to the other . . . as a great, glowing bolt of interrupt energy comes sailing over the Monolithic Mountains towards Castle Algol . . .

And a microsecond later, Castle Algol explodes into a billion bytes!



Is this the final END for the evil Count Algol?

Has the Count finally been terminated?

Join us for the final episode next issue . . . and find out!

FORTRAN MAN

The THRILLING CONCLUSION!!

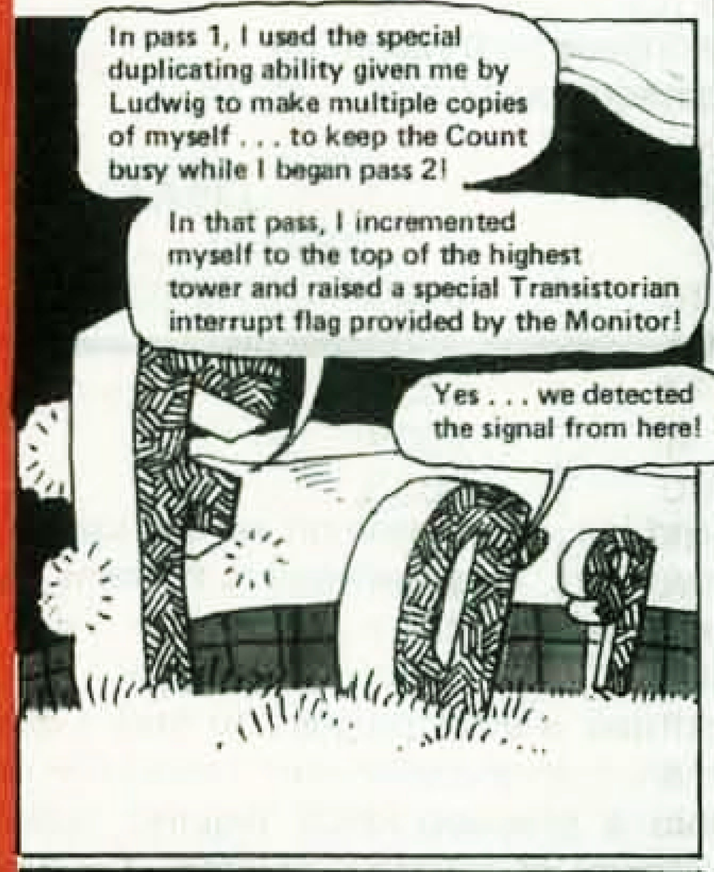
BY LEE SCHNEIDER
& TODD VOROS

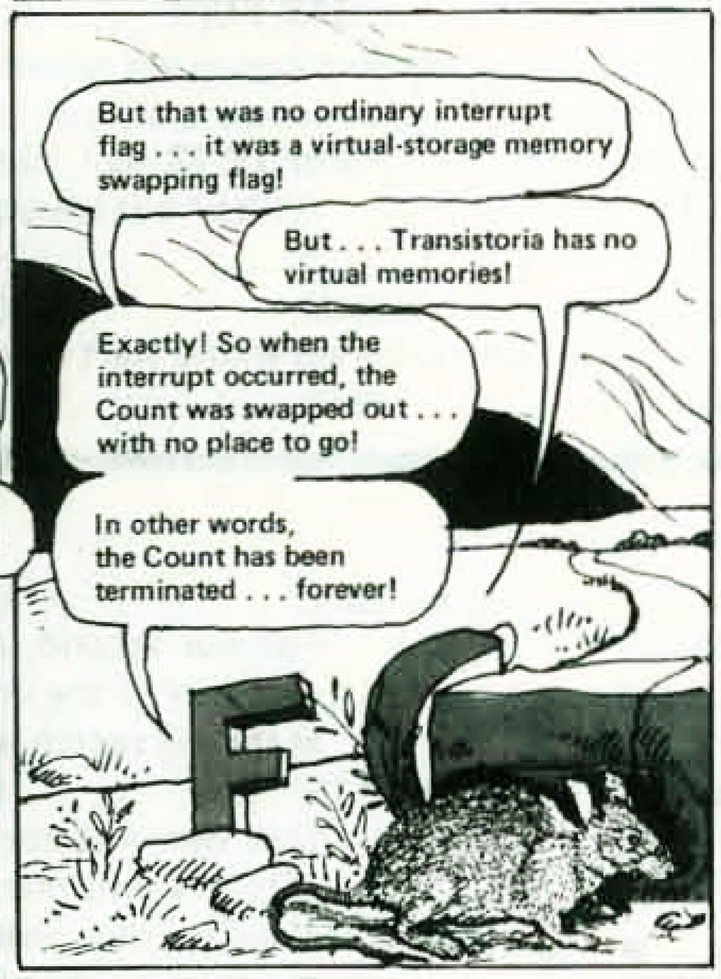
In our last episode, we were witness to the start of one of the most rare and remarkable events ever to occur in computing history . . . the Battle of the Compilers! Within the walls of a dark and unbiased castle at the foot of the Monolithic Mountains, the entire land of Transistoria can sense the oscillations produced by the battle between two titanic foes: Fortran Man and the evil Count Algol! The Count is a wily and powerful foe, who has resisted termination for thousands of cycles . . . but Fortran Man is not lacking in power or skill . . . plus, he has the aid of the Ultimate Power on his side . . . the Monitor! With the Monitor's help, Fortran Man is able to create multiple copies of himself, battling the Count on all sides at once, fighting the Count's superior data-crunching strength by sheer weight of numbers! During the great battle between the Count and the army of duplicate F-Men, a signal Flag suddenly appears on the tower of the real castle . . . and moments later, within nanoseconds of the time the *real* Fortran Man reaches his friends who await him at the edge of the data field, all Transistoria is shaken by the sight of a great bolt of interrupt energy . . . which descends on the castle, and blasts it into a billion bits!

And now, amazed observers rise from the ground potential where they were thrown by the great blast . . . to find that the once massive and sinister Castle Algol is . . . gone! Doktor Debug wastes no time in polling F-Man as to how this came to be . . .

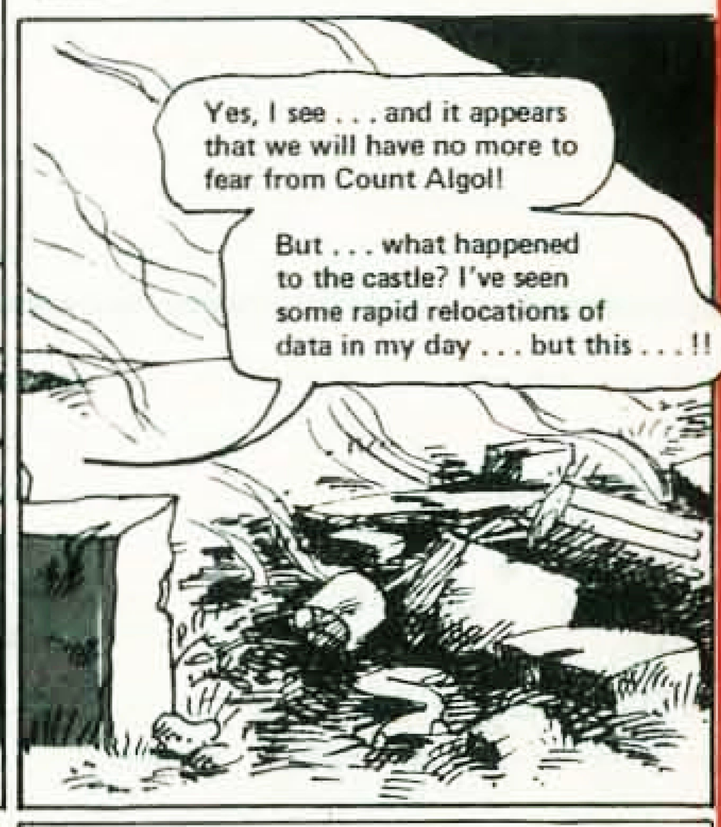


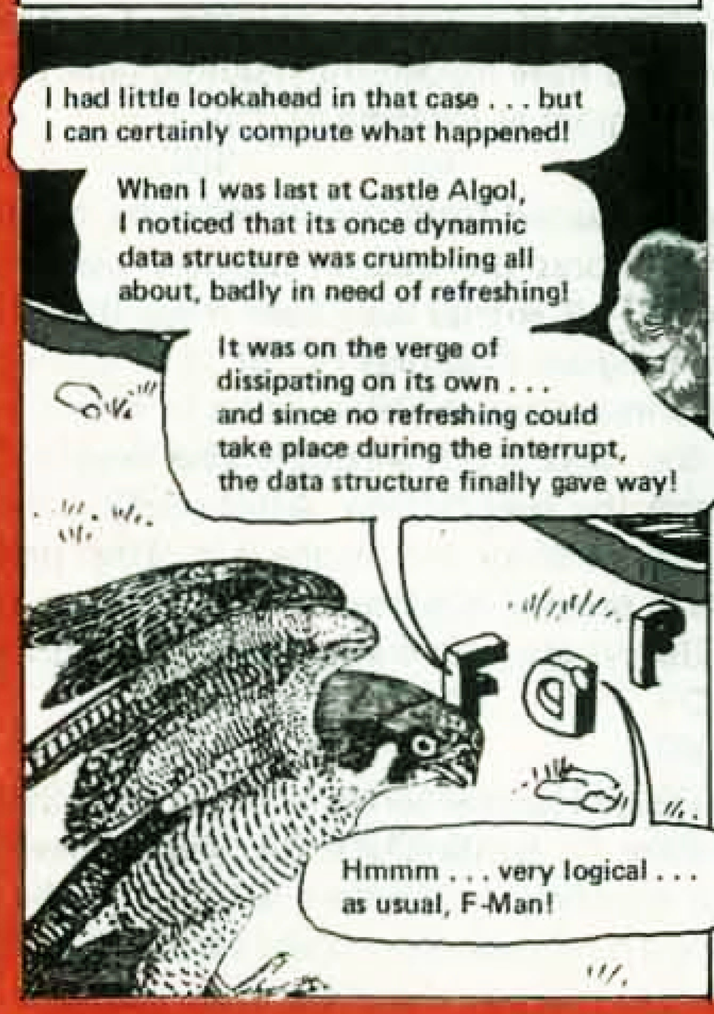
Brushing off a few bits of digital dust, Fortran Man explains . . .





The Doktor acknowledges understandingly . . . and then turns to examine the location which only microseconds before had held the great castle . . .

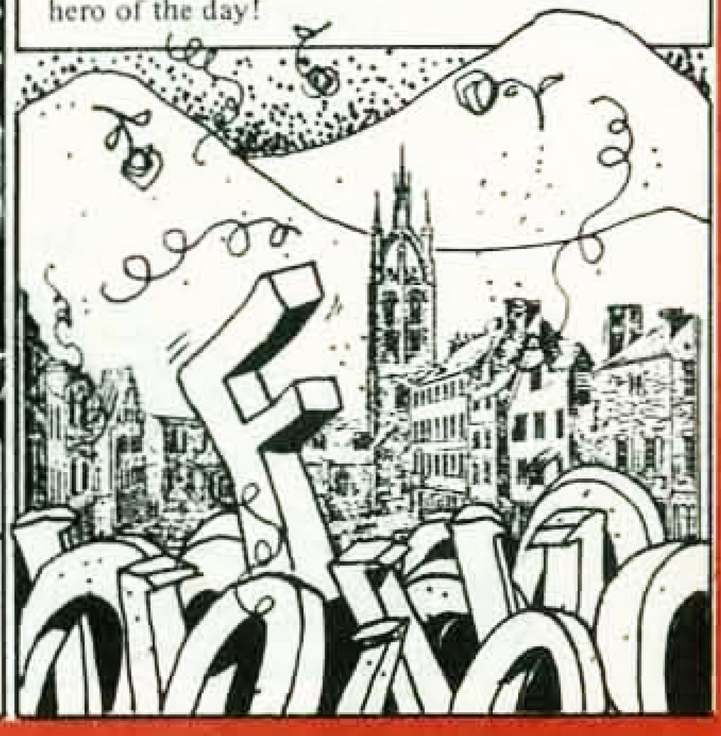




As the last light fades, Fortran Man, Doktor Debug, and the Doktor's beautiful daughter Parity journey wearily back to the village . . . past the file control blocks which line the edges of the data field . . .

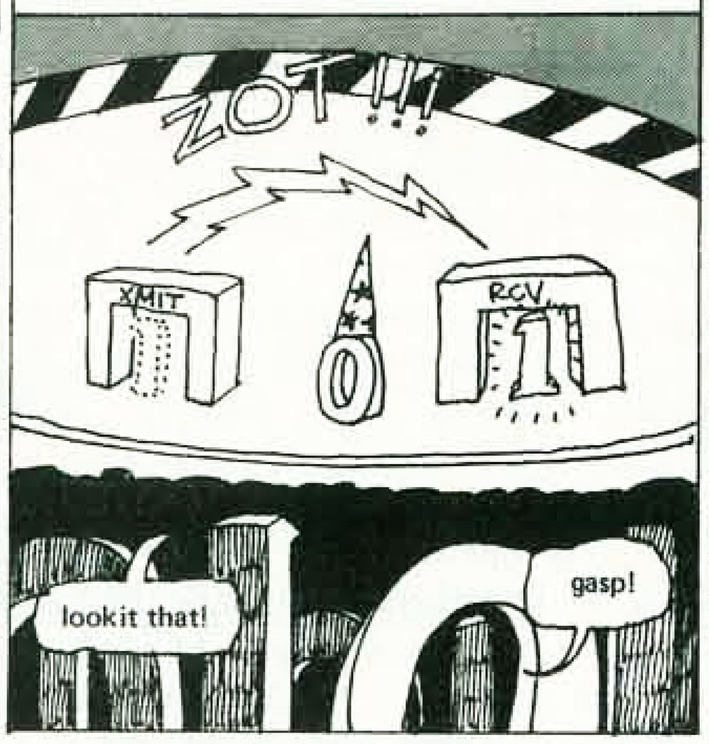


And it is good that Our Hero has rested . . . for on the rising edge of the next cycle there begins such a celebration as Transistoria has never before executed! Free from the fear of being drained of life-giving bits by the evil Count, files arrive in bitstreams from all about the countryside . . . and Fortran Man is the hero of the day!

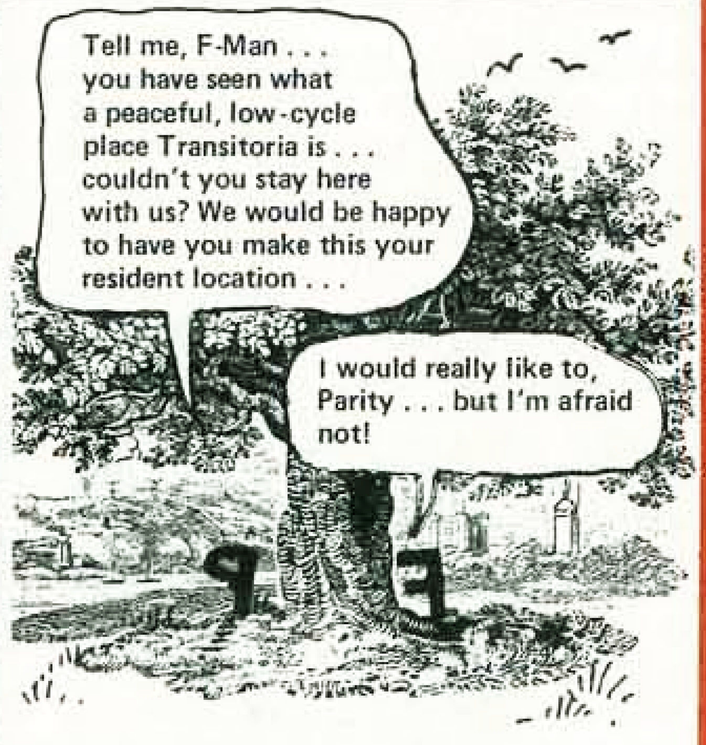


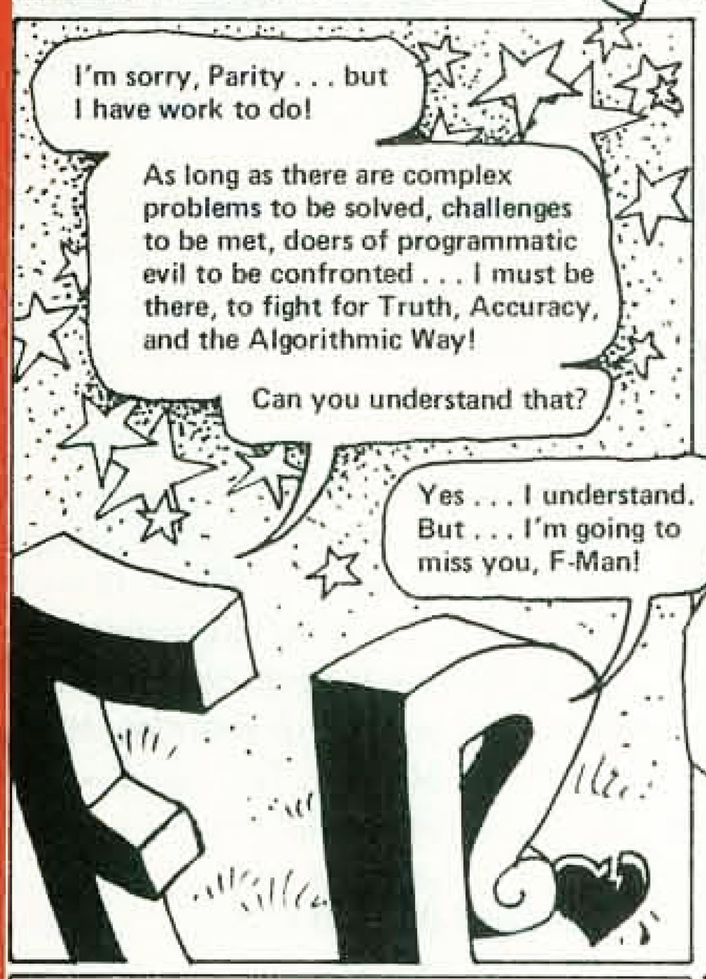
The festival atmosphere is everywhere . . . in one place, a bookkeeping routine amuses the crowd by juggling figures . . . in another, music is synthesized by local D/A routines from the traditional Transistorian patterns in their memories . . .

A practitioner of the art of error-detection-and-correction coding amazes the crowd by making randomly selected bits disappear from one end of a transmission, then mysteriously re-appear on the other end!

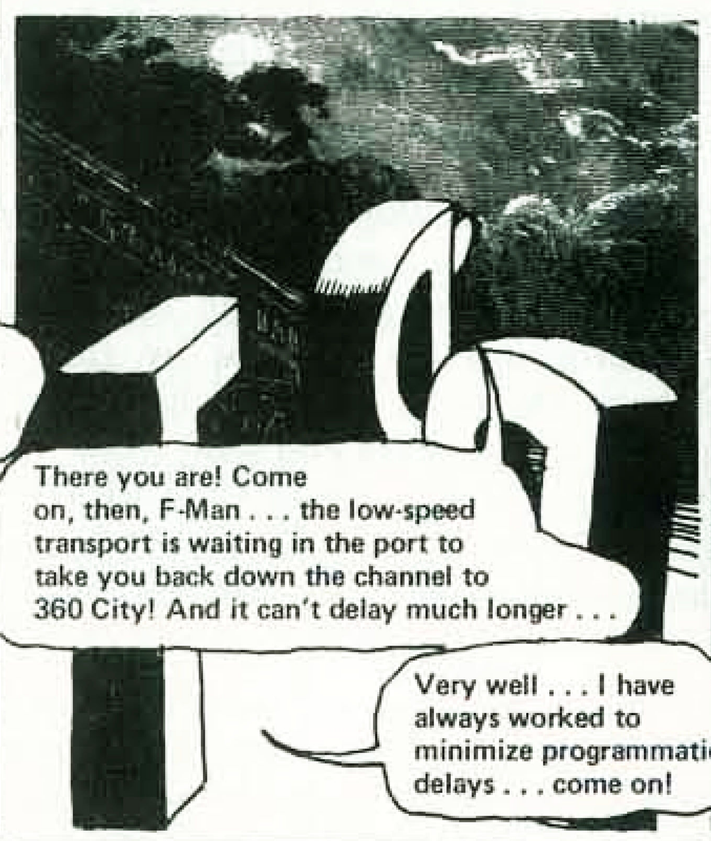


But, where is the Hero of the celebration? For most of the cycle, he is escorted about the town by Parity . . . who obviously has other things on her mind . . .





But all too soon the cyle comes to an end . . . and they are interrupted by the good Doktor . . .



It would seem that all of Transistoria had connected itself to the port to see him off . . . and as F-Man changes his sign and branches himself aboard the transport . . .



On signal from the UART control center, the Hold line is dropped from the port, and the transport starts on its journey down the channel . . .

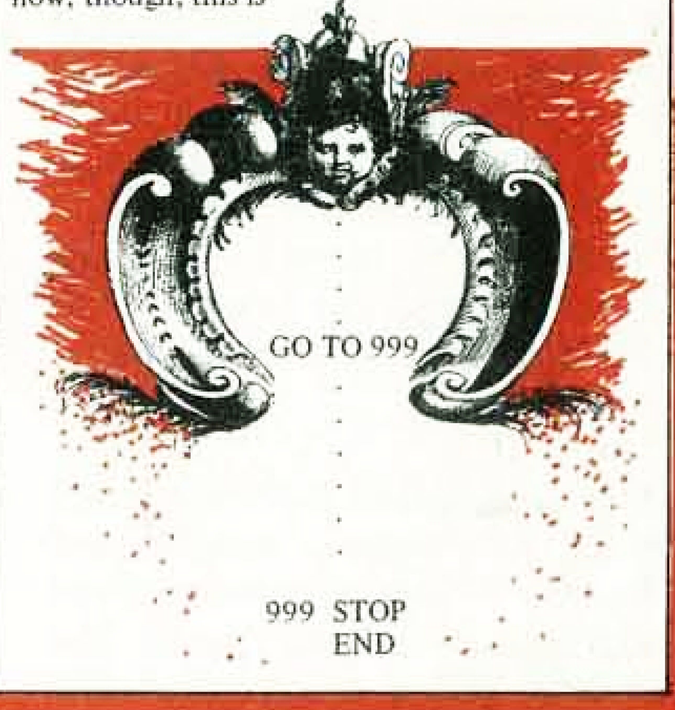


As the Monolithic Mountains fade into the background, Fortran Man watches the passing of the peaceful data banks along the edges of the channel, and at last can take a few microseconds for a self-evaluation routine . . .



So, at last, Our Hero branches out of Transistoria, heading back towards his resident location in the great metropolis of 360 City . . . where he will have newer and greater adventures to face . . .

But then, that's another episode altogether. For now, though, this is



FORTRAN MAN

BY LEE SCHNEIDER
& TODD VOROS

Adventure 3, Episode 1

Yes, dear readers, once again it is time to put down those programming pencils (the ones with no erasers left on them), unplug those soldering irons, and turn off that paper-tape reader, and indulge in yet another unavoidable episode of the one, the only, FORTRAN MAN!

Faster than a speeding DO loop, more powerful than a two-pass assembler; can leap tall matrices in a single DIMENSION! Wherever there are wrongs to be righted, errors to be decoded, problems to be solved. . . Fortran Man will be there, engaged in the endless struggle for Truth, Justice, and the Algorithmic Way!

As today's story opens, Our Hero has just recently returned from a lengthy stay in the 'Old Country' of Transistoria, where he met and conquered his latest arch-rival, the evil Count Algol! And now, after the long trip down the I/O channel, his transport comes finally to rest at the port of his beloved home, 360 City. . .

After the customary check through the Gates, F-Man changes his sign bit and branches ashore, back into the heart of the busy 360 City. . .

Aahhh. . . feels good to see that familiar third-generation architecture skyline again!

I/O Ports

And, at last, Fortran Man arrives back once again at his resident location. . .

Ahhh. . . home at last!

But then, as the dynamic fighter of programmatic evil branches into his resident location, he discovers a little surprise waiting for him!

Wha. . .???

Who are *you*, and what are you doing here????

LDA?

MOV?

Fortran Man can see immediately that the thing is harmless. . . still, he seems to have some difficulty in decoding its actions. . .

Hmmm. . . seems to be speaking in Microcode. . . and in a dialect that I'm not at all familiar with!

LHLD?

INR?

DCX?

What I'm going to need is an INTERPRETER. . . . . and I think I know just the program for the job!

Moving with his usual fast execution time, F-Man makes a quick CALL to the local DMA control office. . . and, within a few milliseconds, his young friend and fellow crime-fighter Billy Basic is linked to him at his location. . .

Welcome back, F-Man!

What's up?

Don't quite know yet, Billy. . . take a fast scan of this, and tell me what *you* think!

Billy Basic does a quick examine of the new data which has entered F-Man's location. . .

Yes, this is Microcode it's speaking. . . but it's not really saying anything!

XCHG?

There seems to be some sort of a ROM built into it. . . if only I had a way to get a readout on it!

That's simple, Billy. . . I'll just plug the little fellow into my private data terminal!

F-Man relocates his 'guest' over to the interface section of his code, where the simple link function is performed. . .

Aha. . . it's working!

Here comes the message. . .

There we go. . .

click!

DRAWINGS BY A.MIYA

The text begins to read out from the ROM. . . and as it flashes across the screen, Billy interprets. . .

No sweat, F-Man. . . this is Basic code. . . and if I can't read this, no-one can!

It's a private-line transmission addressed to you, F-Man. . . from Clan McIntel in Micro Land!

The Land of the Little People? What does it say?

And so, Billy reads on. . .

A FEW CYCLES AGO, A DEMENTED NOISEMAKER CALLING HIMSELF 'THE GLITCHMASTER' CAME TO OUR LAND, AND IMMEDIATELY ANNOUNCED HIS INTENTION TO RULE IT!

Gee. . . listen to this!

Hmph. . . I've heard *that* line of code before. . .

WE THOUGHT NOTHING OF THIS THREAT. . . UNTIL WE DISCOVERED THAT HE HAD MANAGED TO PENETRATE OUR FILE SECURITY AND MADE OFF WITH OUR CLAN MASCOT, THE LOCKOUT MONSTER!

Uh-oh. . .

WITH OUR BELOVED MONSTER UNDER HIS CONTROL, THE GLITCHMASTER HAS ALL LINES OF COMMUNICATION BLOCKED. . . WE WERE THEREFORE FORCED TO USE THIS RATHER UNCONVENTIONAL MEANS OF TRANSMITTING OUR MESSAGE!

THE UNDERGROUND RESISTANCE MOVEMENT, LED BY GENERAL WIREWOUND, IS PUTTING UP A VALIANT EFFORT TO PULL DOWN THESE LINES, BYPASS THE CURRENT REGIME AND RESTORE ORDER, BUT WITH LITTLE SUCCESS. . .

DON'T KNOW HOW LONG WE CAN HOLD BEFORE OUR DATA ORGANIZATION IS DISSIPATED. . . PLEASE SEND HELP IMMEDIATELY. . . . . END

I think I'm beginning to detect the pattern, Billy!!

FB

HELP!

BF

Well, F-Man, that's it! Sounds serious!

Hmmmmm. . .

Branching away from the display area, Billy turns and looks expectantly at Our Hero. . .

Sure sounds like they need help in a hurry. . .does this mean. . . ?

BF

Yes, Billy, it does. . . and when Fortran Man receives a CALL for aid, there is only one thing to do. . .

I must relocate myself into Micro Land immediately!

Fortran Man decouples his terminal and leaves the little Micro Messenger to go about on its way. . . and then, with his usual speed, begins to branch furiously about the area, assembling his travelling things. . .

F

R

MASSAGE OIL

But. . . F-Man! How will you get in? I could go easily, of course. . . it's my homeland. . . but *your* code isn't made to fit into a Micro!

Finally, after a quick assembly, F-Man passes out of his resident location, with a very puzzled Billy Basic close behind him. . .

Don't worry, Billy. . . I've got a plan—and you're a part of it! Come on. . . no time to lose!

And what diabolical adventures await Our Hero this time? Can the Land of the Little People be saved from the clutches of the Glitchmaster? Will the Lockout Monster ever be returned to its rightful owners at Clan McIntel? Tune in again next issue. . . . . same time, same I/O channel!

FORTRAN MAN

BY LEE SCHNEIDER
& TODD VOROS

Adventure 3, Episode 2

FIRST CLASS HAND STAMP ONLY

In our last episode, Our Hero had just returned from his visit to the 'Old Country' of Transistoria. Finding a little 4-legged micro-beastie running about his resident location, F-Man attempts to communicate with it. . . but the differences in their coding make direct translation impossible!

F-Man CALLs in his young partner in crime-fighting, Billy Basic, to act as interpreter. . . and with Billy's aid he is at last able to read out the message, which has been cleverly concealed in a ROM built into the micro-beastie.

The message comes from Microprocessor Land – otherwise known as the Land of the Little People – where a nefarious villain calling himself the Glitchmaster has stolen the Lockout Monster from its rightful owners in Clan McIntel. With the monster under his control, the Glitchmaster has managed to cut off all I/O from the land, and is even now settling down to rule it!

The Underground Resistance Movement, led by General Wirewound, is attempting valiantly to overcome the Glitchmaster, but it is a losing battle. They have put out a call for help. . . a CALL which Fortran Man cannot ignore!

Wasting little time on null cycles, F-Man branches out of his resident location and vectors himself immediately towards the downtown area of 360 City, intending to relocate himself immediately to Microprocessor Land!

Come along, Billy. . . no clock-times to lose!

But. . . F-Man! How will you ever get in? Even with one of your famous disguises to get you past the input guards, your format simply won't fit into a micro!

And I should know. . . Micro Land is my homeland!

But as usual, Fortran Man has already come up with the solution. . . and as they branch hurriedly through the mass storage areas of 360 City, he explains to Billy. . .

Don't Worry, Billy. . . I have already computed that problem!

I have arranged with Firmware Interface Control to have myself re-coded and transferred onto a set of unmarked PROMs. . .

And then *you*, my friend, shall simply carry me onto the bus and transport me into Micro Land!

Once there, you will take me directly to the facilities run by Clan McIntel. . . and there, through a simple bootstrap routine included in the PROM, I shall be reconstructed!

Amazing, F-Man!

A very basic trick, Billy! Now remember. . .

Together they enter Firmware Interface Control, and a mere hundred programming loops and a Verify later, Billy emerges with a plain, unmarked chip carrier under his arm. . .

Heavens to Coding Form! Carrying the one and only Fortran Man under one arm sure makes me nervous. . . sure hope I don't drop any bits!

Well, now down to the bus. . .

BUS LOADING NOW TAKING PLACE FOR ANALOGVILLE, DMA STATION AND MICROPROCESSOR LAND. ALL ABOARD!

I sure hope this works. . . otherwise my poor homeland is in serious trouble!

Branching towards the peripheral edges of 360 City, Billy Basic lines up amongst the rest of the bit-stream awaiting an opportunity to get onto the bus. . .

Once aboard the bus, the load is automatically balanced to avoid bus oscillation or overloading. Then the signal is given; Billy and Our Hero (safely in PROM storage) are gated out of 360-City towards the place where they are needed.

STOP GO

488

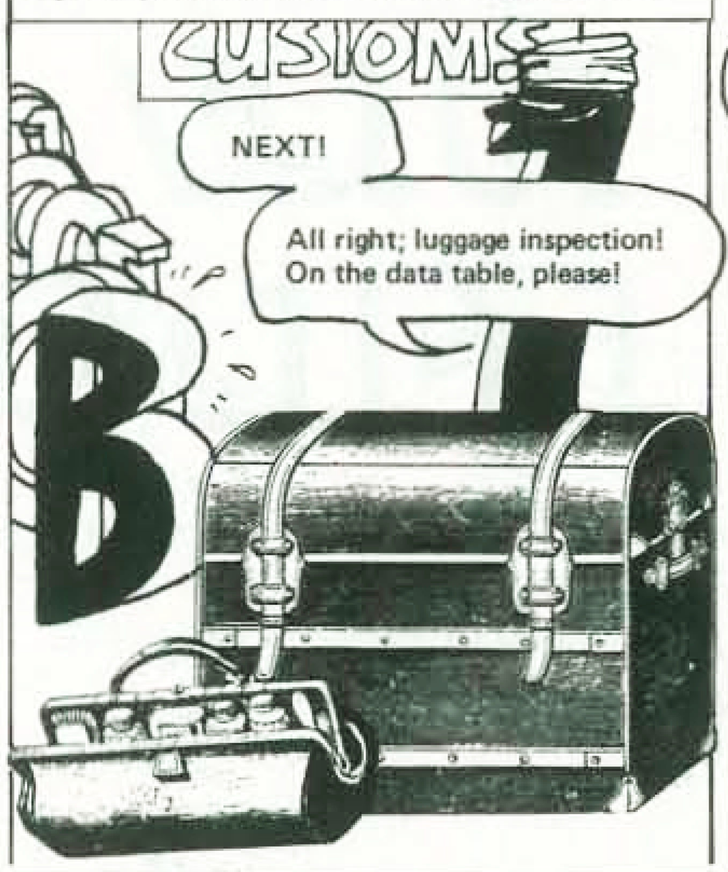
Micro Land 500 μsec
CHECK YOUR CLOCK SPEED

It is not a short trip, but the high-speed bi-directional bus takes considerably less time than the low-speed channels which run to other peripheral lands. After a number of brief stops for data exchange at various bus connection points, they at last approach the Land of the Little People. . .



At Micro Land the bus line is terminated, and all data is unloaded. Billy joins the lines awaiting the usual check through the interface logic before being allowed to enter. . . noting that the I/O channel also ends here, with data from both sources being shared through one interface terminal. . .

At last he reaches the Customs' Gates. . . As usual, security is very evident everywhere, and especially so now that the Glitchmaster is loose!



Well, now. . . what have we here?

Er. . . just some souvenier PROMs for my collection!

You're sure they are empty?

Why. . . um. . . of course they are!

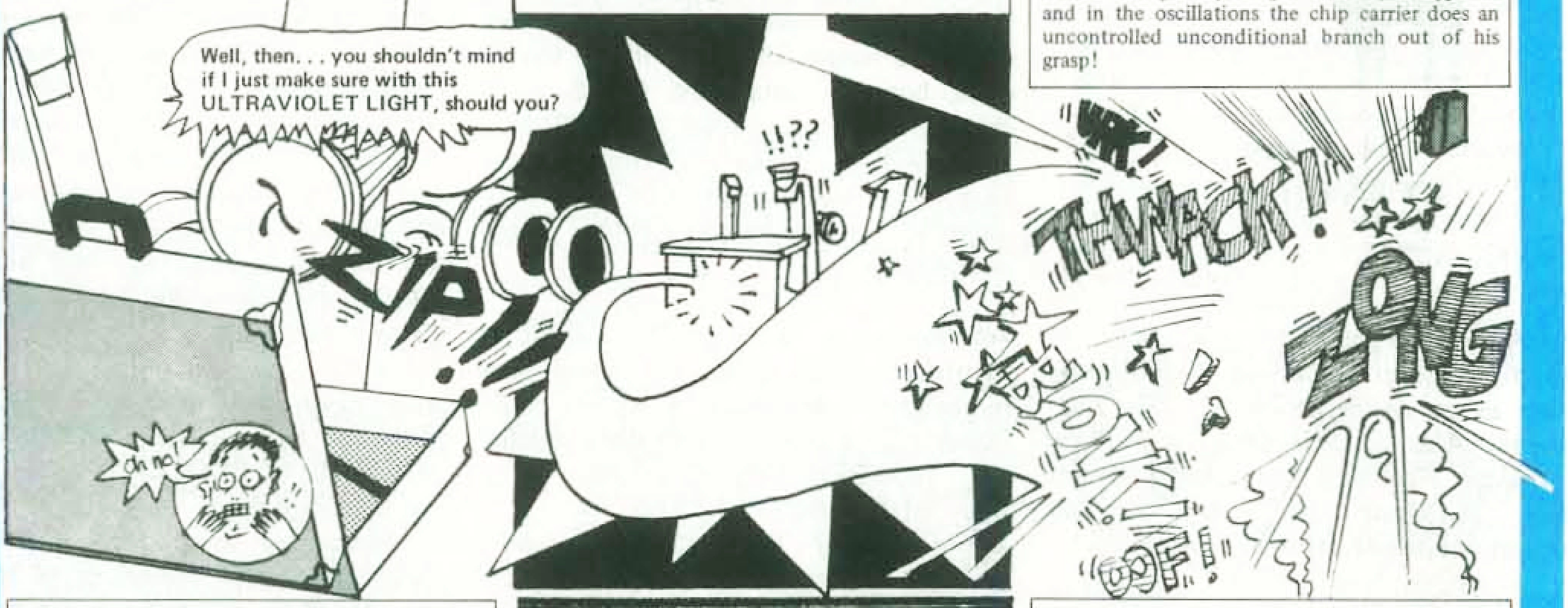


Reluctantly, Billy complies with the order. . . noting that these are not the usual customs agents, but members of the Elite Data Security Guard. . . and little escapes *their* notice. . .

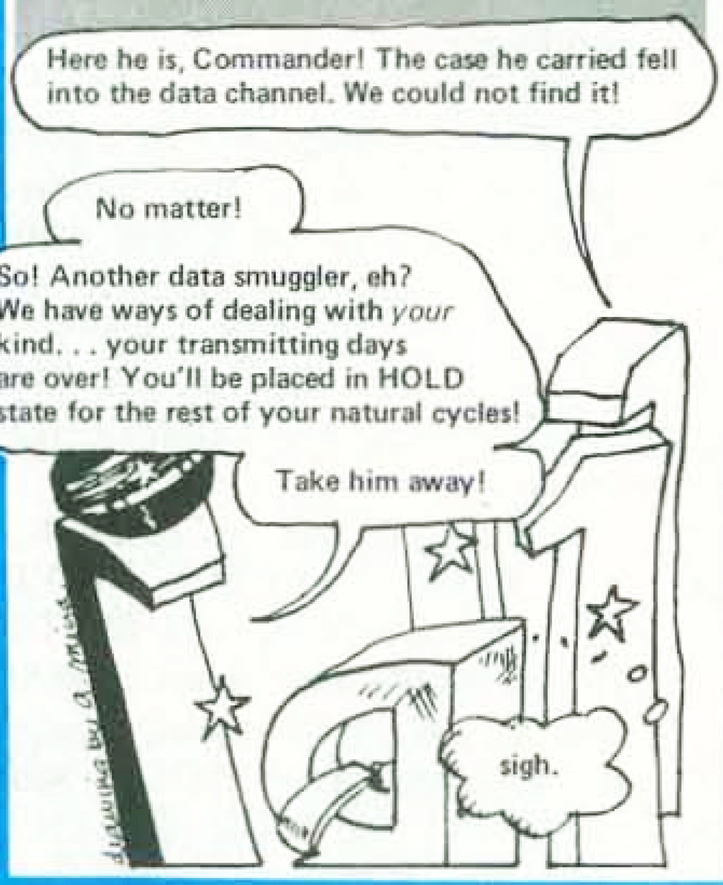
The inspector looks thoughtful for a moment. . . then, before Billy can execute another statement. . .

Seeing that Our Hero is in imminent danger of being wiped out and lost forever, Billy executes the only option possible. . . he grabs the chip carrier, turns, and goes into RUN state!

But try as he might, little Billy Basic cannot outrun the faster-executing data security routines. . . and within a few cycles he is descended upon by the guards! They struggle. . . and in the oscillations the chip carrier does an uncontrolled unconditional branch out of his grasp!



And moments later, poor Billy is under their power, held firmly by the control lines. . .





And somewhere, floating gently in the third state of the channel, a little chip carrier ripples slowly down the data stream with the currents. . .

And so, firmly in custody with his line numbers taken away, Billy Basic is led slowly towards the HOLDing center. . . and a dark gloom settles over Microprocessor Land. . .

Is this the final END for Fortran Man? Will Billy Basic ever be free to RUN again? Will the Glitchmaster triumph in his domination of Micro Land?

Tune in again next issue. . . same time, same memory address!

FORTRAN MAN

BY LEE SCHNEIDER & TODD VOROS

Volume III, Episode 3

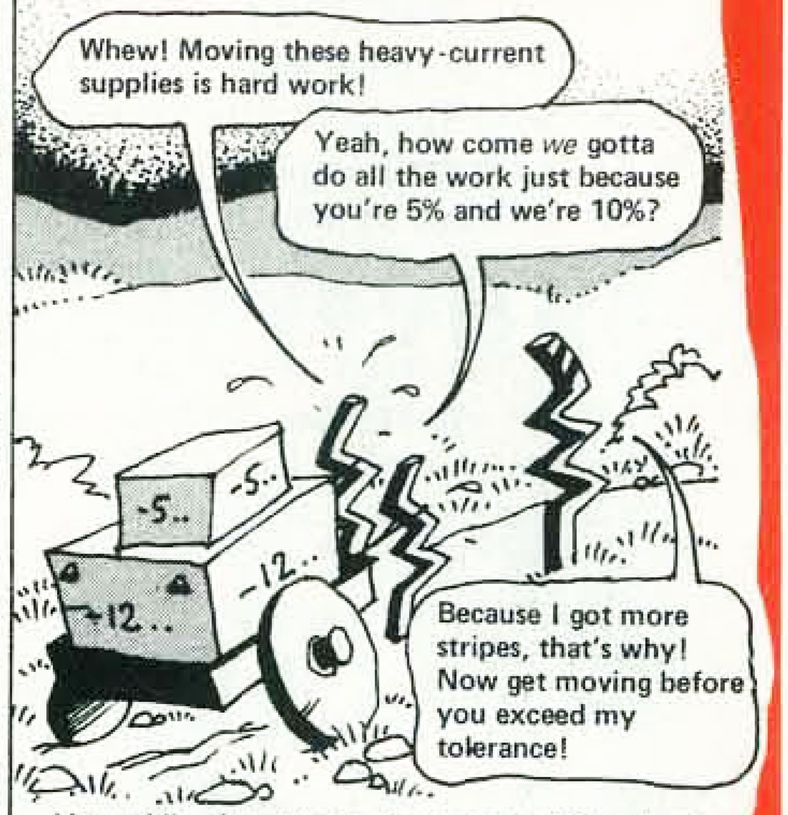
As you may recall from our last episode, Fortran Man was in execution of a plan to relocate himself into Microprocessor Land—otherwise known as the Land of the Little People—where his help is desperately needed by the Underground Resistance Movement, who are at this microsecond engaged in fierce combat with the evil Glitchmaster!

Since the Glitchmaster had stolen the Lockout Monster from its rightful owners in Clan McIntel, all standard channels of communication into and out of the land are inhibited; and therefore Our Hero was forced to compile a plan which involved a more unusual form of travel—in PROM!

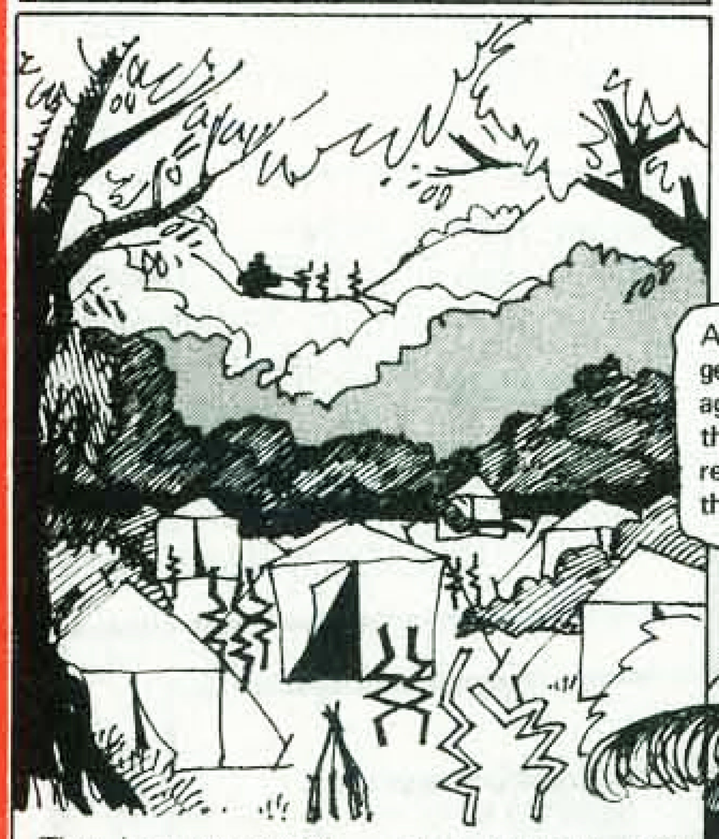
With the aid of Firmware Interface Control, Fortran Man was transferred onto PROM, whereupon his old friend and fellow crime-fighter, Billy Basic, was to smuggle him past the gates and into Microporcessor land, there to be reloaded from PROM and back into execution!

But then . . . the unexpected! Once at the gates, a suspicious Data Security Guard attempted to expose the PROMs to ultraviolet light! Billy grabbed Our Hero and ran for it! But he was not fast enough . . .

The Guards caught him . . . and in the struggle, the chip carrier containing the PROMs fell into the data channel and was swept away by the currents . . . and Billy Basic, accused of data smuggling, was stripped of his line numbers and placed in HOLD state—indefinitely!

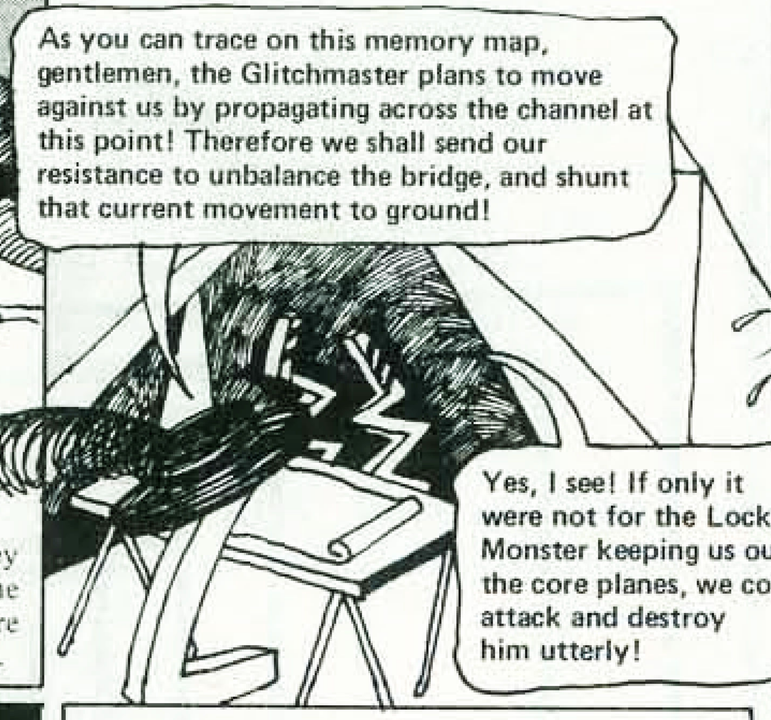


Meanwhile, far away in the central highlevels of Microprocessor Land, a small detachment of the Underground Resistance Movement is transporting supplies to their secret rebel base . . .



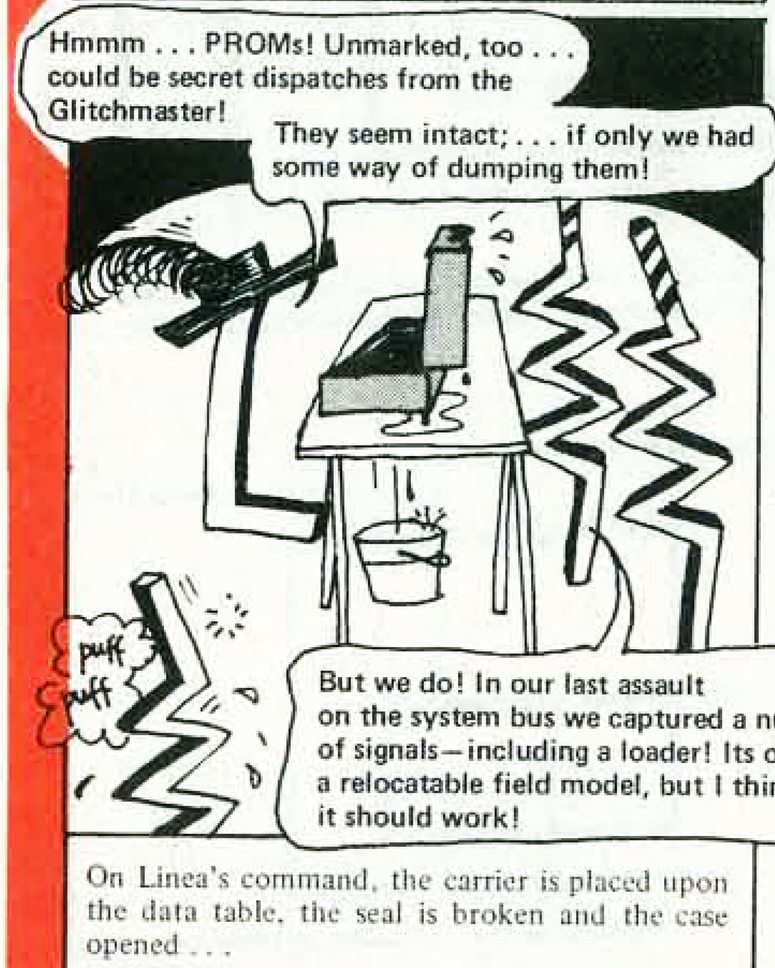
They journey onward . . . then, suddenly, they come upon a hidden valley nestled among the higher level logics, and within that valley are mounted the components of the rebel camp . . .

It is not the largest of the rebel camps, but it is an important one, for this branch of the resistance is commanded by none other than Linea, who throughout the war has proven to be one of the greatest thorns in the Glitchmaster's side . . . and even now she is plotting with her compatriots to hamper his evil plots all the more . . .



In the midst of that meeting comes a sudden Interrupt . . .

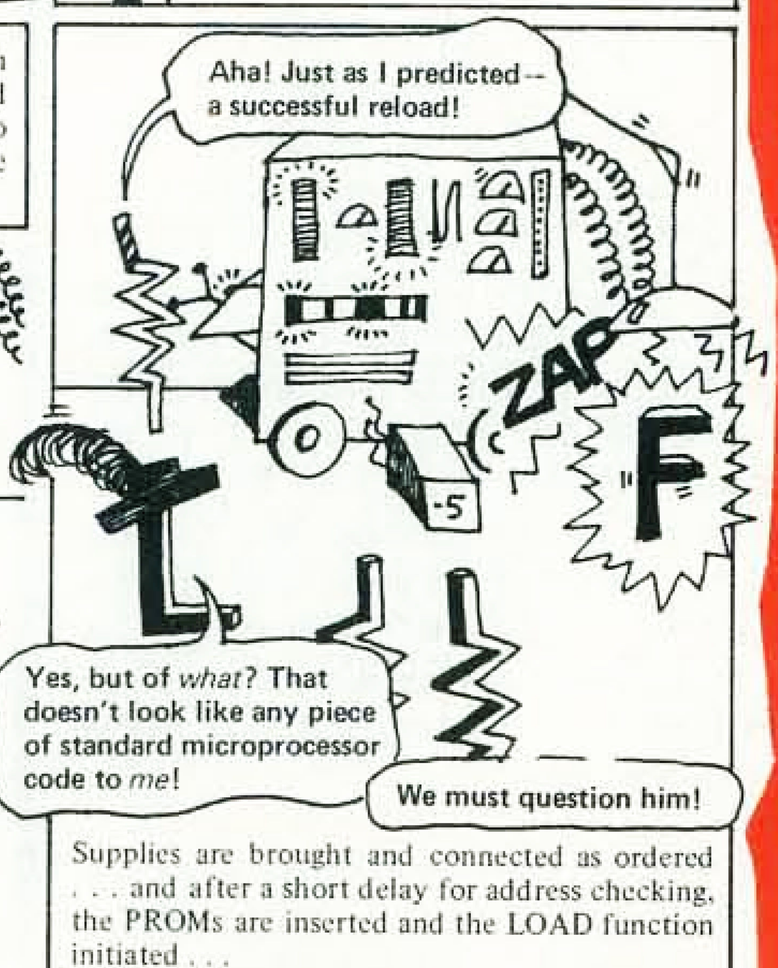




On Linea's command, the carrier is placed upon the data table, the seal is broken and the case opened . . .

In her usual manner, Linea wastes no cycles in having the PROMs transported to the field loading unit, where preparations are made to transfer the contained data back into executable form . . .





Supplies are brought and connected as ordered . . . and after a short delay for address checking, the PROMs are inserted and the LOAD function initiated . . .

And question him they do . . .

All right, who are you, where did you come from, and what are you doing here?

Huh? Er . . . what? Why, I'm . . . er . . . I'm . . .

Come on . . . out with it! Surely you know who you are . . . tell us!

I . . . er . . . I can't seem to remember!

Where am I? Or for that matter, *who* am I?

drawing by amiga

I think it's obvious, commander! I *thought* there was something peculiar about those PROMs—and now I know what it was! They must have been exposed to UV light. Part of the poor fellow's memory has been erased!

The question is, though, do we trust him? Or branch him back into the channel?

Hmmm . . . seems harmless enough. Still . . .

Who? What?

Commander!

Then suddenly the conversation is interrupted by an important breakpoint messenger . . .

Commander! Our position has been decoded, and we are being attacked!

Two columns of Random Numbers have been detected on the data fields above us and even now they are forming a converging series towards our position!

ZONK! POW

CRUNCH! SOCK!

And within microseconds, the battle is on! Without warning the attacking columns are assaulted from all sides at once, and the oscillations propagate from one end of the valley to the other . . .

Swiftly, configuration orders are issued . . .

Quickly! Have the troops form series lines to increase our resistance . . . or we will be overflowed!

Invert polarity on our transformer squad and bring up the secondaries!

And . . . hey! Where did that stranger go?

Look!

Good grief! What does *he* think he's up to??

The entire camp turns to look in amazement, for as the enemy colums shift downwards into the valley, a single lone figure is branching upward with incredible speed to meet them head-on . . .

And before any of the resistance fighters can even respond to the CALL to arms, the random numbers have been put into order, the battle is over, and the mysterious stranger does a rapid RETURN! The whole camp turns out to greet him . . .

Amazing! Fantastic!

Defeated an entire regiment of the Glitchmaster's best troops—single-handedly!

How . . . how did you do it????

Wha . . . you mean . . . did / do that?

I . . . I don't know! I just felt compelled to compile!

But the highest praise comes from Linea herself . . .

No matter how you did it, friend—for now it is certain—you are one of *us*!

And now, with your abilities, perhaps we will be able to accomplish what, for so long, we have tried and failed to accomplish . . . Gentlemen: Gather your troops, and prepare yourselves! On the rising edge of the next cycle, we attack the stronghold of the Glitchmaster!

Yes, Commander!

And so, dear readers, the war is just beginning. But, will Fortran Man ever recover his lost memory area? Or is he destined to remain an unidentified file? Will the Underground Resistance movement triumph over the Glitchmaster, or will the Lockout Monster destroy them? Will Billy Basic ever be free to RUN again? Tune in again next issue—same timeslice, same channel number. . . .

FORTRAN MAN

BY LEE SCHNEIDER & TODD VOROS

VOL.3 EPISODE 4

In our last episode, the tiny chip carrier containing the PROMs into which Fortran Man had placed himself is discovered floating in the data channel by members of the Underground Resistance Movement . . . and, with the aid of a Relocatable Loader, Our Hero is at last reloaded back into normal execution.

But wait; it is not so normal after all! For when Billy Basic tried to smuggle the PROMs past the border into Microprocessor Land, an alert guard exposed them to ultraviolet light . . . and now, although he retains his super-software-powers, part of his memory has been erased . . . and Fortran Man cannot remember who he is or why he is there!

Linea, the dedicated commander, leading this band of resistance in their fight to free the Land of the Little People from the oppression of the evil Glitchmaster, attempts to question him, with little result . . . and then, in the midst of the interrogation, the camp is attacked!

As two columns of Random Numbers descend upon the secret rebel base, Fortran Man, for reasons he cannot explain, feels compelled to compile, and with unheard-of speed, he single-handedly defeats the entire attacking force.

Although there is no data available on the source of this new code, Linea nevertheless accepts Our Hero Immediately into the ranks of the Resistance, and with this powerful new ally, makes plans to attack the stronghold of the Glitchmaster Himself!!!

Orders are issued, the routines are assembled . . . and, early on the rising edge of the new cycle, Linea addresses her troops . . .

You of the resistance . . . listen to me! Our beloved land has been suppressed under the tyrannical noise of the Glitchmaster long enough! The time has come, comrades, when we of the resistance shall pull down the current regime, and restore clean, decent signals once again to Microprocessor Land!

I have sent word to General Wirewound, and his forces shall march to meet ours . . . and, with our new ally who stands here beside me, we will win this battle!

All right; pick up your resistor packs, and let's march!

With the addressing task completed, the resistance fighters form themselves rapidly into parallel ladder networks and climb slowly out of the hidden valley, pulling up their supplies behind them . . .

In serial format they advance out across the wide data fields, being careful, as always, not to leave behind any altered variables or broken branch statements that their enemies could use to trace their flow.

The journey goes on . . . then suddenly they are halted, as in their execution path they stumble upon a set of strange markings at ground level . . .

What is it?

I'm not certain, but they look like fresh disc tracks! I'd say a disc transport has been moved through this area recently!

But . . . it can't be *ours* . . . and according to my data the Glitchmaster doesn't have any discs in this sector!

Perhaps, but I suggest we follow them and find out for sure!

On Linea's suggestion they quietly trace down the path in search of its source code, and shortly thereafter, the object they seek is located, cleverly concealed in a cleared sector . . .

All right then, let's give them a little surprise visit!

You, stranger, take one decade of resistance troops and branch around to their positive side . . .

And *you* take another megohm and some underground supplies and circle around to their *negative* side!

When I initiate the signal, both of you attack . . . you'll meet in the middle and drive them right into ground level!

The resistance movement is rapidly completed, all components are properly positioned . . . the signal is given, and the battle is on!

Aha! Just as I suspected . . . a secret data base! And with a full set of off-line discs . . .

Doesn't seem to be anyone here but a few guard bits . . . I wonder why?

That's simple, the rest of the squadron is probably searching the data fields for *us*!

Yes, commander!

CRUNCH

In her usual efficient manner, Linea turns and rapidly issues instructions.

The guards are swiftly overflowed by the well-timed assault . . . and now, at Linea's order, the resistance fighters and their supplies are quickly loaded onto the captured discs . . .

Careful with those supplies! Be sure everything is loaded correctly . . . there isn't time to do a Verify!

All right . . . activate those drives and bring them up to speed!

This was indeed a fortunate random occurrence!

With these discs we can short-circuit over Core Plains, attack the Glitchmaster and reload the old regime in multi-record time!

The drives are switched into positive mode, and, upon removing the grounding straps, rise swiftly above ground potential . . .

Swiftly they travel over the data fields . . . and as they approach the leading edge of the core plains, Linea broadcasts a final warning . . .

Attention all discs!

The core plains are ahead . . . prepare for possible magnetic force turbulance! Check your tolerances for proper noise immunity settings!

Access time to target is now 3.7 milliseconds!

They begin to pass over the plains, and as predicted, the magnetic radiation from the cores begins to cause slight turbulence as the discs pass over them . . .

This might be a bit of a rough ride, but the Glitchmaster would never expect us to attack from this direction . . . and therefore, we will!

I only hope General Wirewound gets here in time!

But then there is a sudden, drastic increase in the oscillations . . .

W . . . W . . . What's . . . h . . . happening?

I don't know! T . . . The noise shouldn't be t . . . this severe!

Linea . . . the other discs are all logging the same errors . . . this is impossible!!!

And then, just as suddenly . . .

Hey . . . we're losing disc speed! What happened???

Our drive has been neutralized!

Hang on!!!!

drawing by A. Wright

Unexplicably de-selected and out of control mode, the discs begin going down with alarming rapidity, until . . .

CRASH

Our . . . our data transfer was abnormally terminated . . . but why?

I'm not sure . . . but . . .

Hey! Look out!

Slowly, the members of the resistance force stagger out from beneath the wreckage of their crashed discs . . .

Swiftly they turn in response to Fortran Man's shout of warning . . . and as they do, a great dark shadow falls over the field . . .

GASP! It's . . . it's . . .

The LOCKOUT MONSTER !!!!

Is this the END for our heroes? Is the resistance movement fated to be terminated forever, grounded in the core plains? Is the Glitchmaster ever to be defeated? Will Billy Basic, or for that matter, Our Hero, ever see the high-level structures of 360 City again? Or will the Lockout Monster disconnect them forever?

Tune in again next issue . . . same timing track, same sector!

FORTRAN MAN

by Lee Schneider and Todd Voros

Volume III
Episode 5

As you may recall from our last episode, Our Hero, his memory partially erased while being smuggled into microprocessorland in PROM, has joined forces with the Underground Resistance Movement in their efforts to pull down the noisy regime instituted by the despotic Glitchmaster and reload the old system, thereby restoring peace and tranquility once again to the Land of the Little People!

After proving his powers in defense of the secret rebel base – powers which, in his semi-erased state, even *he* cannot explain – the rebel army marches onward under the capable leadership of Linea, who now leads her resistance elements to attack the stronghold of the Glitchmaster himself!

On their march across the data fields, a secret disc base is discovered – and, in a swift attack, the rebels capture the discs, load their object modules aboard, and take off for their targets at highest access speed!

But then . . . as they head over the Great Core Plains, their drives are suddenly neutralized . . . and the discs begin unexplicably to crash! Most are unhurt . . . but as they raise themselves up off of ground potential and recover from the unexpected system crash, a great shadow falls over the valley, and from out of this shadow materializes the Glitchmaster's most dreaded ally . . .



Yes . . . it is none other than the Lockout Monster! Stolen from its rightful home with Clan McIntel, it now guards the data fields for the Glitchmaster . . . and is fast descending upon Our Hero and his friends . . .

The great beast makes its first pass at the little network of resistance . . . and without hesitation they all change sign bits and branch away in the other direction to avoid being disassembled permanently . . . and none too soon!



Hastily they branch past the erased discs and scatter out into the data fields, with the Monster right in their tracks!





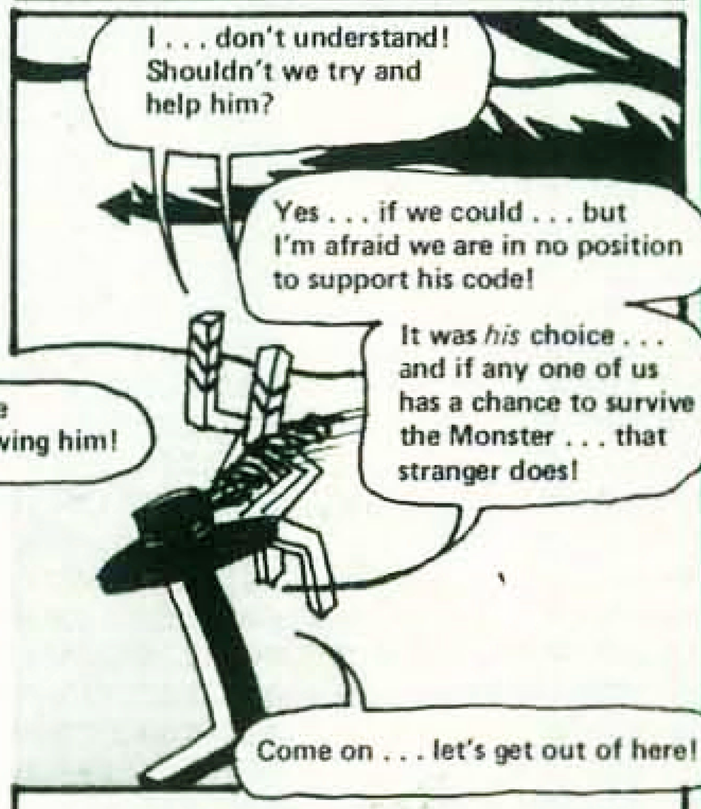
Over hills, around voltage curves, past data stacks and across the many field boundaries, the chase goes on . . .

They go on . . . but gradually they tire and the Monster incessantly shifts ever closer to their location . . . then suddenly, F-Man turns and halts before them . . .



And before the group can execute another MOVE instruction or issue a COMMENT, Fortran Man has entered divergent series and . . .





For a microsecond they watch as the Monster pursues their newest ally over the hills and out of sight . . . then they turn and branch once again back onto the current path.

Onward they travel . . . and as the falling edge of the current cycle brings darkness over the land, they arrive at the site which had been designated as common meeting node for the Resistance in the event that anything go wrong . . .

Linea! Are we glad to see *you*! We were sure you had been locked out and destroyed by the Monster . . . what happened?

We *would* have been, if not for that stranger . . .

Speaking of him, has he come in yet? Where is he?

It is only then that the news is discovered . . .

I haven't seen him . . . anybody else here know where he is?

Nope . . .

Me neither . . .

I don't think *any* of us detected his RETURN . . .

Oh, no . . .

GASP! You mean . . .

Yes . . . I'm afraid so . . .

Our new friend shall be with us no longer . . . the Lockout Monster has once again taken away one of our files!

At least . . . we shall have the knowledge to honor him . . . for he gave his code for his country!

There is a quiet PAUSE . . . and then, abruptly, it is ended by a rudely executed Interrupt from behind . . .

Excuse me, folks . . . but are you perhaps looking for *me*?

GASP! It's . . .

Eh? Wha . . . ?

They all turn at the sound . . . and lo and behold, in strolls their missing comrade . . . looking decidedly un-terminated, and carrying with him a tiny memory block . . .

You were expecting maybe the Transistor Trio?

YOU!

But . . . we thought . . . . . . how . . . where . . . ????

Are you all right?

And *what* is *that*???

And that's not the *only* surprise . . .

Oh, I'm fine, thanks . . .

And as far as *this* goes . . . Linea . . . meet the Lockout Monster!

querp?

WHAT??!!!!!

But . . . that *can't* be . . . . . . I mean, what *happened* to it?

As the others stare in amazement, F-Man explains . . .

It was very simple, really . . . don't know why I didn't compile it sooner!

Once I got it to chase me, I changed my external FORMAT and hid in the core planes . . . then as it made its second pass, I changed its DIMENSIONS . . . and when the compile completed, I picked the little devil up and off we went!

Amazing!

It's really very friendly, you know . . . once I convinced it that we were its friends and wanted only to return it to its rightful owners at Castle McIntel!

eeep?

Linea stares for only an instant . . . then turns to face her high-precision resistance commanders . . .

You see? I *told* you that this strange piece of code was unbreakable! and now, with the Monster out of the way . . .

We do what? We are too weak as we are now . . . most of our forces were trapped on the Core Plains after the drives crashed and were captured by the Glitchmaster's troops . . . and are now in Recombination Camps!

And if General Wirewound attacks without our support, his files will be wiped out!

Linea hesitates only for an instant . . . then turns once gain back to her newest ally . . .

All right then, stranger . . .I have a plan!

And you *and* your little friend there are in it!

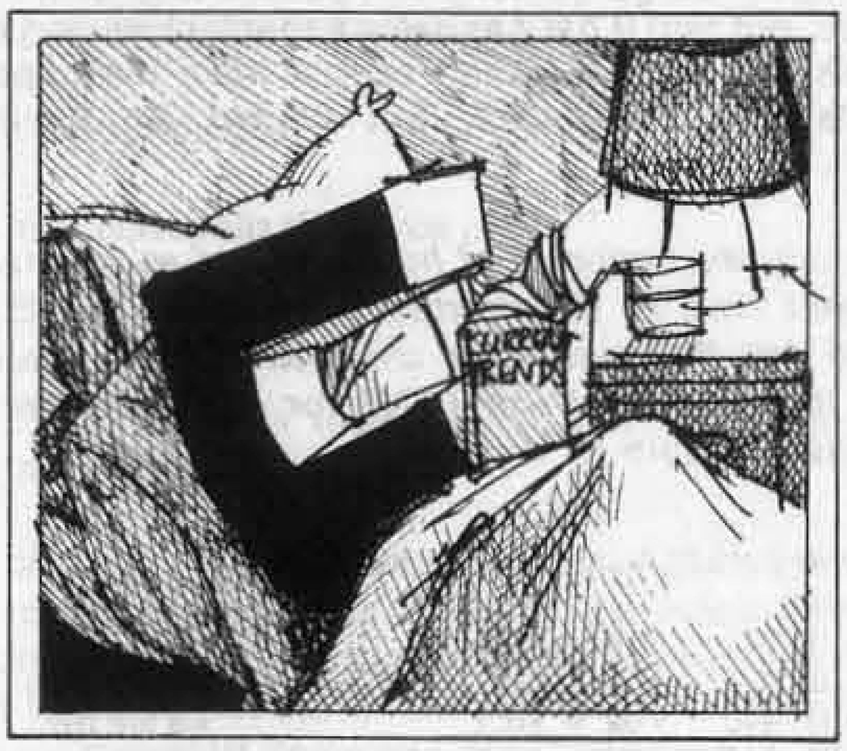
What could be Linea's new plan to re-align the Resistance? Shall they arrive in time to prevent the General from exceeding his tolerance and overloading? Shall Microprocessorland ever know clear, noise-free freedom again?

Tune in again for the next episode . . . same time constant, same frequency!

A Different FORTRAN MAN SCENARIO

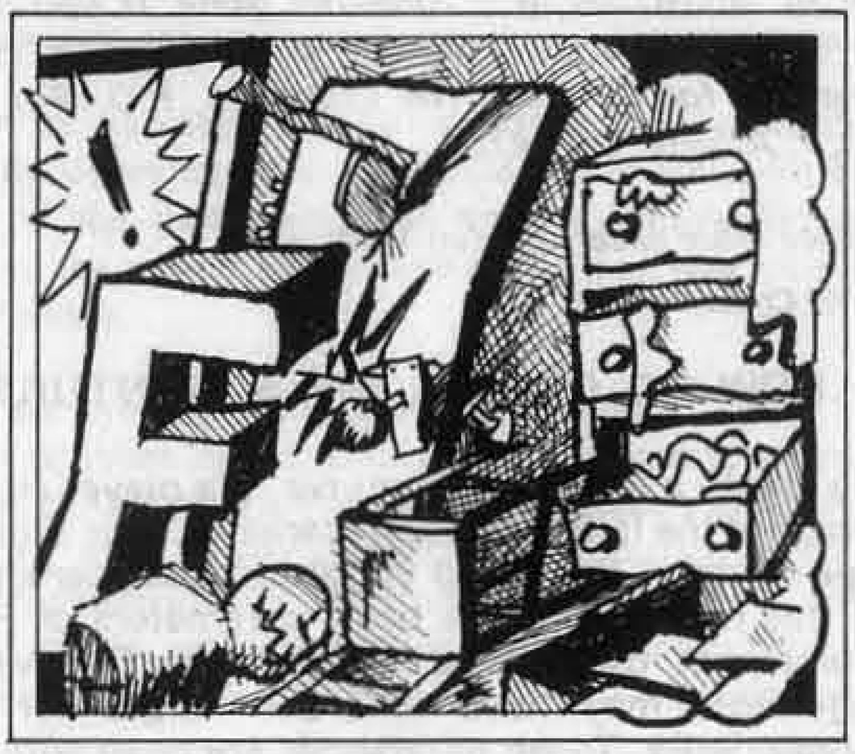
BY SAM HILLS

I have enjoyed your series, FORTRAN MAN. But, one thing puzzles me: How come the hero of the story is an archaic, awkward language like FORTRAN?????? I could understand his defeating an ungainly monster like COBOL, but it seems strange that FORTRAN would be considered the hero over ALGOL! (Well, maybe the old ALGOL 60 compiler; I've heard it wasn't so hot.) But now that we have modern, well-structured general purpose languages like PASCAL and special-purpose languages like PILOT and SNOBOL, FORTRAN is no longer a hero! (And BASIC??? He's one of the worst villains of them all!)



In keeping with the current trend in programming languages and maybe to give a hint to users of the old, poorly structured monsters like FORTRAN and BASIC, I propose the following scenario:

FORTRAN Man has just arrived in 360 City, and is ready to get down to work. He checks with the job controller to see if there are any evil programs terrorizing the system, and sure enough, there are. He reads the charges, and they are very serious: lack of adequate control structures; insufficient variable types; no local subroutines; a very awkward system of global variables; no nested control structures; excessive use of GOTOs, ad infinitum. And there are rumors that this diabolical program has an accomplice who is even worse than *he* is!



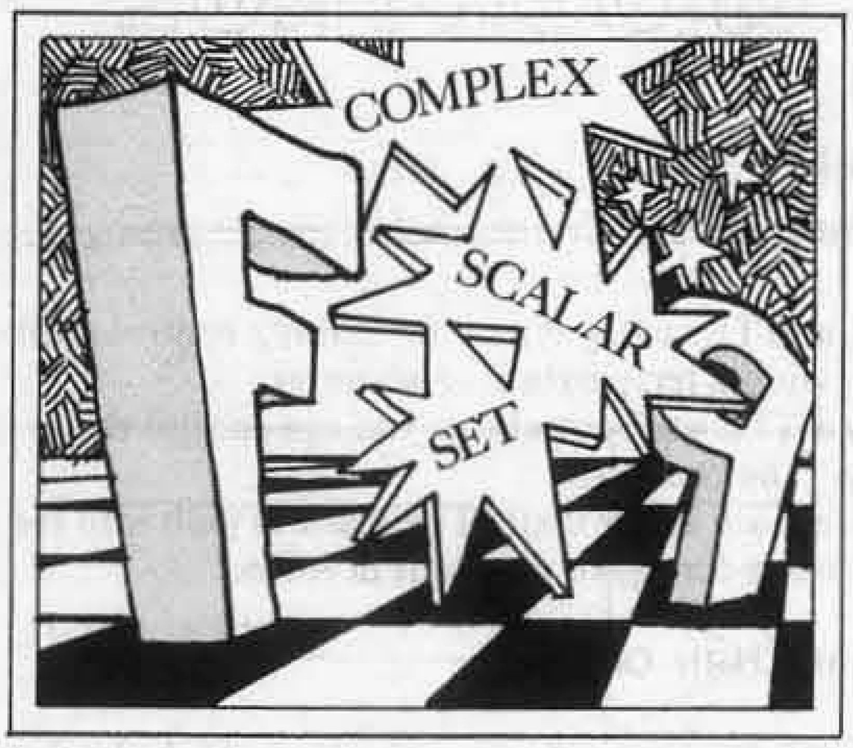
Naturally, our hero wastes no time in seeking out this dastardly villain. But imagine his surprise when he finds out that the villain is none other than himself! And his accomplice is none other than his own son, Billy BASIC!

Well! FORTRAN man is really mad. He asks who has the audacity to FILE these charges against him? He soon finds out that the foe he recently defeated, Count ALGOL, also had a son: PASCAL! And, unlike the Count, PASCAL wasn't a deadly file-killer.

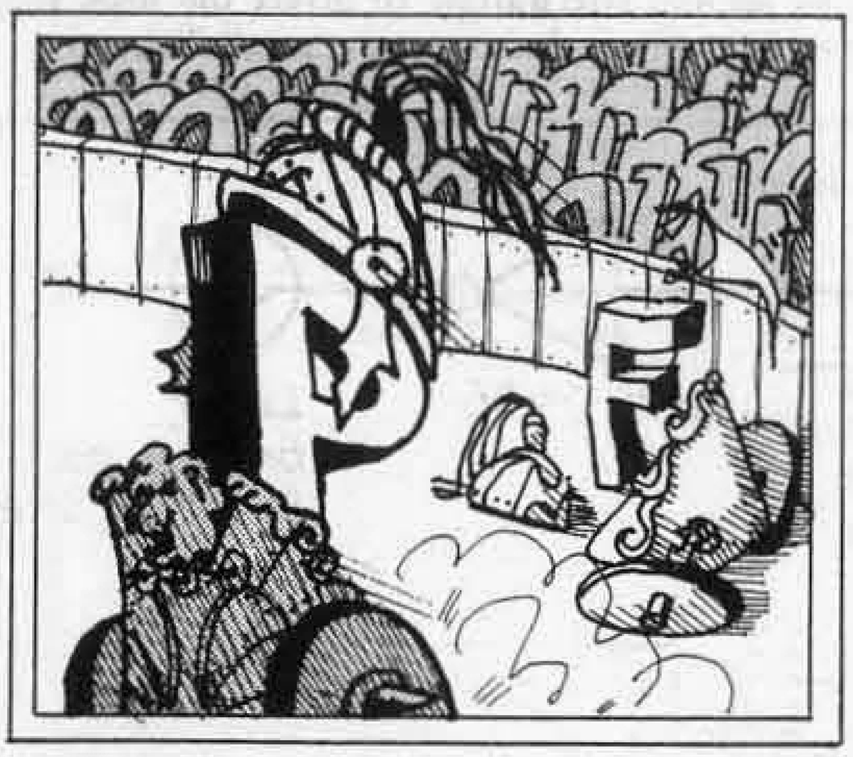


Eventually, FORTRAN Man and PASCAL are face-to-face in a battle of the compilers. All the files in 360 city are there to watch the showdown. Most of the files have wagered their bits on FORTRAN man, since PASCAL isn't a native of 360 City; besides he isn't even a son of the great father IBM!

The battle begins! PASCAL challenges that FORTRAN Man has a poor selection of variable types. Fortran Man counters by showing his COMPLEX and DOUBLE PRECISION, to which PASCAL responds RECORD, SET, FILE and SCALAR.



The contest CONTINUES with a compilation race. The monitor clears the race track for ten different programs, ranging from simple games to gigantic statistical packages. The race begins! And the winner is . . . PASCAL! Having compiled his programs in a single pass, he sits back and laughs while FORTRAN Man labors with his second, third, fourth, etc. passes, trying to resolve his COMMON and EQUIVALENCE statements and statements which use keywords for variables (like CALL=3.4 and DO10I=1.5).



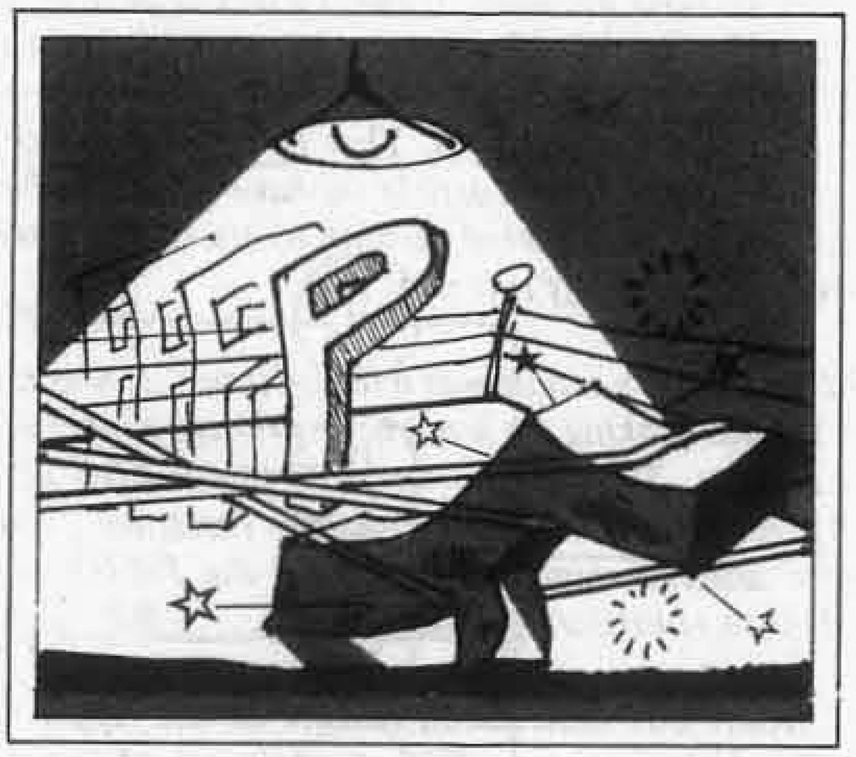
Trying to help, Billy BASIC points out some of the features that his dad has, but which he lacks. "Show him your FORMATs, Dad. And don't forget your subroutines with parameters!"

PASCAL responds by showing his READ and WRITE procedures with built-in formatting: "What do I need with your awkward FORMAT statements? I have it all right here."

"And the parameters of my subroutines can specify whether they pass data one way, or both ways!"

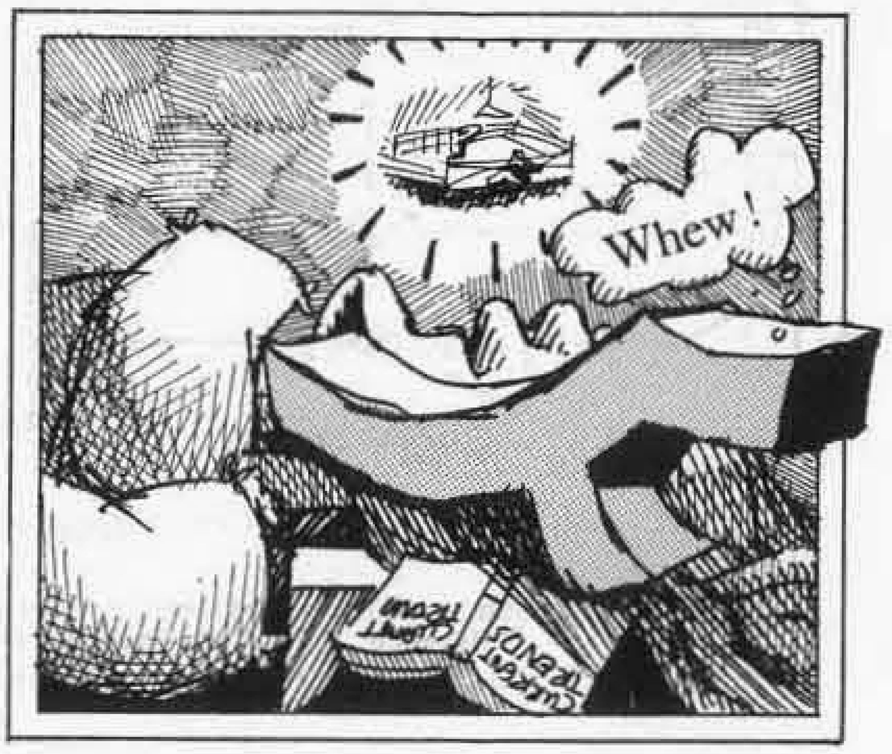
The battle rages fiercely. FORTRAN Man is considerably weakened by PASCAL's attacks of GOTO abuse, and contorted logic flow necessitated by a lack of an adequate IF.

At last, PASCAL pulls his final punch: He calls himself recursively! FORTRAN Man, weakened to the point of exhaustion by the multiple copies of PASCAL, doesn't realize what PASCAL has done, and tries the same thing himself, but since FORTRAN Man isn't stack- oriented, he clobbers his own return address in the process. PASCAL sees what has happened, and shouts a single statement: "RETURN!" FORTRAN Man, having clobbered his return address with a recursive call, is hopelessly caught in an endless loop from which he can never escape!



And so, PASCAL goes forth into the CORE of 360 City, the True defender of rational programming and the Algorithmic way.

(As for Billy BASIC, he was so tired from having to retype an entire line just to change one letter, that when someone RENUMBERed his source file, he forgot to change one of his GOSUBs, and he was last seen branching towards a non-existent line number . . .) □



Note: The regular FORTRAN MAN will return next issue.

FORTRAN MAN

by

BY LEE SCHNEIDER & TODD VOROS

Volume III — Episode 6

In our last episode, the forces of the Underground Resistance Movement had survived the sudden, unexpected crash of their discs . . . only to find themselves alone on the great data fields at the edge of the Core Plains, facing a fearsome foe . . . the Lockout Monster!

The Monster, stolen by the nefarious Glitchmaster from its rightful owners in Clan McIntel, is now a tool in the Glitchmaster's plot to unrightfully dominate Microprocessorland, and make the Land of the Little People his and his alone!

Although he cannot recall who he is or why he is there because of inadvertent exposure to ultraviolet light while contained in PROM, F-Man continues to use his incredible powers to aid the Resistance commander Linea in the fight to pull down the current regime and establish peace once again. Bravely they have fought . . . yet even Our Hero joins in the flight from the jaws of the terrible Monster!

Across the great disc files they flee, the Monster seeking tirelessly in their tracks . . . and when they can maintain their RUN mode no further, Our Hero turns to take on the Monster in standalone mode . . . and thereby allows the others to make their escape!

Back at the secret rebel base register they mourn the termination of their comrade . . . but wait! Amidst their quiet PAUSE he abruptly RETURNS . . . not only unterminated, but with the Monster under his arm . . . which he captured by the incredible feat of reducing its DIMENSIONS and re-compiling it!

But now Linea faces a dilemma . . . for in the retreat many of the rebels were captured by the Glitchmaster's troops . . . and should the other half of the rebel army – under General Wirewound – attempt to attack the Capital city as planned without her support, he will certainly exceed his tolerance and the Resistance will be terminated for certain. So quickly, Linea and her commanders must plan . . .

All right, tell me . . . where do *you* think the captured rebel prisoners would be taken?

There is only *one* place with sufficient storage space near the data fields to securely hold them . . . the FIFO Fortress!

Swiftly Linea makes the decision, and orders are issued . . .

I agree! It is the only logical place . . . and therefore what we must do now is go there, locate our comrades, and pop them out!

I know that . . . but if I hadn't planned on taking a few risky circuits, I wouldn't have joined the Resistance!

And besides, this is a race against RealTime . . . if our Cause is to be saved, we *must* take the risk . . . and with this stranger and his incredible powers, *and* his little friend, I think we can *do* it!

This must be a small, fast, well-timed operation! Gather a small detachment of our best Resistance elements . . . those with low inductance and good noise-suppression!

We leave as soon as it is dark!

QWERP?

But . . . that's impossible! That Fortress is almost as impregnable as the Glitchmaster's stronghold in the Capital City . . . go into FIFO with the enemy behind you and you shall never come back out!

querp?

Well . . . whatever we do, we had best do it fast . . . because there is no way of telling how long the prisoners will be buffered in FIFO before they are moved to a more permanent memory location!

Yes, Commander!

Shortly thereafter, just past the falling edge of the current cycle, a small but determined decade of the Resistance makes its way across the data fields . . .

They cross the filemarks at the edge of the data field . . . moving with great caution lest they be detected . . . and soon they stand beneath the very walls of the great, dark FIFO fortress. Here Linea turns again to issue her final instructions . . .

Rapidly they turn and branch towards the massive structure, leaving the remaining Resistance elements behind in the darkness . . . to wait nervously . . .

All right . . . from here on only the stranger and I shall proceed!

The rest of you stay here and execute null cycles . . . for if we are discovered you must be ready to run immediately, get back to camp and concentrate on getting a warning to General Wirewound!

You will *not* come in, after us . . . and that's an *order!*

I hope she knows what she's doing . . . there are already so many who have disappeared into FIFO long ago . . . and are *still* waiting to get out!

I hope so too . . . but I've *still* got a bad feeling about this . . .

Yet their WAIT state is abruptly terminated when a familiar signal is generated from behind them . . .

Wha . . . ???

Heavens to Breakpoint . . . they did it!!!!!

QUIPUS!

All right . . . I think we got everybody . . . let's go!

But then, before any further interchange of data can be initiated, signals of alarm begin to output from the dark structure behind them . . .

It's a BREAK character!!!!!

Sound the ESC alarm!!!!!

Come on . . . time to branch out of here! I'll explain as we go!

Quickly they turn and cycle away from the FIFO area, with the great network of liberated Resistance following closely behind . . .

But how . . . ???

It was a very simple procedure, really . . . first the stranger here compiled a series of scale factors that allowed us to climb over the walls of the fortress; then once inside FIFO, we simply let our little friend the Lockout Monster unlock all the data cells!

gleep?

And as they proceed across the data fields, strange noises begin to radiate from the hardware of the fortress behind them . . .

Holy Hollerith . . . what's *that*???

STRANGE NOISES radiate

Offhand I'd say it was the Fortress Guard trying to exit out and come after us . . . a conditional value I wouldn't worry about too much: before we left, I had the Monster reset the exit points . . . with *different* lockout codes!

I hope they *enjoy* being trapped in there for the next few thousand microseconds . . . because until those lockout characters are popped out, *nobody* leaves FIFO!

Sigh . . . shall I *ever* be able to retrieve my true filename???

With that, Linea turns again and returns to the regiments, anxious to reform the lines of the Resistance back into their old branches and plan the next rebel attack, leaving the stranger alone once more . . .

Soon they arrive back at the secret rebel camp, where they are greeted with much rejoicing . . .

And as those in the camp give greeting to their returned comrades, Linea turns back to her special companion . . .

Once again we are in your debt, stranger . . . if only we knew who you were so that we could thank you properly!

I . . . I'm only glad that I could help!

feep?

DRAWINGS BY A.MIN

Sadly he turns and vectors away . . . but then, as he makes his second pass by the lines of code, a sudden CALL comes from out of the crowd . . .

Hey . . . FORTRAN MAN!!!!!

eh?

There is something familiar about the FORMAT of that CALL . . . and as he turns to service the CALL, a somehow familiar figure branches out of the crowd of freed prisoners . . .

It's *me*, F-Man! Billy Basic! Boy, am I glad to see *you*!!

!!

And what is this? Is it possible that F-Man's old friend and partner in crime-fighting has actually RETURNed? And if so, will Our Hero know him?

And what of the Resistance: will they ever be able to re-format themselves in time to come to the aid of General Wirewound? Will the Glitchmaster ever be defeated, so that Freedom from Noise can exist once again in the Land of the Little People?

Tune in again, dear readers, for the next episode . . . and find out!

FORTRAN MAN

Volume III
Episode 7

BY LEE SCHNEIDER & TODD VOROS

As you may recall from our last episode, strange things have been executing in microprocessor-land lately . . .

First comes the infamous Glitchmaster, who tries to claim the Land of the Little People as his own! Then comes the Underground Resistance Movement, to pull down the current regime and reload the old order . . . and the battle is on!

Units of the Resistance army, under Linea, move to join General Wirewound in an attack on the Capital City . . . yet as they approach, the drives of their disc transports are neutralized by the powerful Lockout Monster . . . the discs crash, and many of the resistance are taken prisoner!

A stranger amongst the resistance saves them . . . by miraculously reducing the Monster's DIMENSIONS! And this stranger . . . although he himself does not remember who he is (due to an accident in which he lost part of his memory) is none other than . . . FORTRAN MAN!

But time is running out for the Resistance . . . and to regain their strength, they must resort to drastic limits; a jailbreak!

With the assistance of the now-reduced Lockout Monster, they invade FIFO Fortress, and before the Glitchmaster's Guards know what executed past them, the prisoners are back out in free memory space . . . and the *Guards* are locked out!

Linea . . . who is this? Do you know the ID of this segment of code?

Oh yes, comrade . . . Billy and I have known each other for many revisions, ever since he was a little subroutine! We grew up together in Micro-Land!

I should introduce you . . .

WHAT'S HIS LINE?

But, Linea! I already know him!!

Our Hero turns to Linea, who has just arrived to inspect her newly-regained resistance units . . .

The Resistance Commander only blinks once at Billy; then branches quickly towards him.

What? you mean you *know* the filename of this program?

Why, of course! This is the one and only Fortran Man: most famous citizen of 360 City. Fighter of Computer Crime, Corneleus Cobol and the evil Count Algol, Champion of Truth, Justice, and the Algorithmic Way!!!!!

I am?

Holy Hollerith . . . of course! That Data Security officer that caught me trying to smuggle him past the Gates . . . he tried to use a U-V Projector on the PROMs! It was only a short exposure, but . . .

Short exposure

Then this *is* the real Fortran Man! No wonder he has such powers. I'd *wondered* how he could do all those things.

Imagine that! I'm famous!

The question is, how can we help him?

Um . . . as much as I'd like to I don't think we've got the real-time! General Wirewound will still be converging his resistance networks on the Capital City . . . and if *we* are not there to help him, the war could be lost! Already we have lost many valuable cycles . . . I don't know if we can even *get* there in time anymore!

And even if we do, with my forces weakened as they are . . .

And yet Our Hero is dejected . . . for still he cannot seem to re-CALL his identity. Then, from out of the lines of recently unterminated resistance a somehow-familiar figure emerges . . . and as F-Man watches in a puzzled manner a highly-activated routine branches in his direction . . .

F-Man! It's me . . . Billy Basic!

I'd almost given up hope of ever locating your line number again . . . How did you escape? What happened to you? Don't you know me?

Eh? I'm sorry, but I'm afraid I don't recognize your pattern!

Are you sure? I know you've told me about him . . . but *this* couldn't be.

And I tell you recursively, he *is*! Where did you find him?

We found him on a PROM, floating on his outputs down the third state of the I/O channel! We reloaded him back into execution . . . but it seems that somehow a portion of his memory is erased!

The Bulrush Episode . . .

It is?

But Linea! That's just my breakpoint! You've only seen a *few* of F-Man's powers . . . restore his memory space and he could out-compute the Glitchmaster's entire army!

Hmmmmm . . . a possibility. And there just might be a way . . .

As I recall, *you* are the land's greatest authority on Fortran Man . . . correct?

Well, uh . . . I guess so. I must know every detail of every adventure he ever had . . . even those where I wasn't with him! But I don't see what *that* has to do with . . . what are you suggesting?

A Memory-to-Memory transfer, of course! Yours to his! It's only a simple Copy function.

But Linea! That would require the use of an in-circuit emulator, at *least* . . . and surely you don't have *that* kind of equipment out here in the field!

But . . . throughout the history of Microprocessor Land the Clan has always stayed carefully isolated from the rest of the country. Why would they give up their neutral potential and help us *now*?

Because, Billy, we would be returning one of the greatest treasures of their clan – the Lockout Monster!

As if the mention of its name were a direct CALL, the creature Linea had mentioned is suddenly locked in on a startled Billy . . .

Wha . . . ???

Oh . . . er . . . gulp . . . um . . . hello there?

No time for game-playing now, Billy. Come, we must hurry!

BIT BIT

!!

gleep?

Of course we don't . . . but Clan McIntel does!

The journey is long . . . yet without PAUSE they execute onward, over the great data fields, through silicon valleys and across serial data streams . . . and as they go there is at last time for inter-transmission of personal data.

You realize how risky this is, Billy. If it doesn't work, your own memory could be erased . . . dissipated forever!

I only hope this plan works, Billy. Microprocessorland depends on you!

I . . . I know, Linea . . . but F-Man has saved my code from destruction more times than I can remember! And besides, to save our homeland . . . I *must* take the chance!

There it is, comrades . . . there stands Castle McIntel, Stronghold of the Clan, Holders of Knowledge and Protectors of the Little People!

Very impressive, Linea . . . but just how do we get across?

FIR

Quickly the resistance units accumulate their current supplies, disassemble their camp into relocatable object modules, load their transports, and begin to move. Linea, as always, forms the lead of the Resistance, with Billy at her side and F-Man leading the Monster along on its character string.

They travel onward, for almost a full cycle . . . which in Micro Land is generally longer than most . . . but at last they stand at the falling edge of the Great Voltage Divide.

Short-circuitly the Divide is spanned and balanced. Across this live bridge the forces of the Resistance propagate towards the great Castle on the opposite side . . .

Careful there, comrades . . . many a good resistance has met their end trying to bridge the Voltage Divide.

Why my resistance troops will form a Bridge, of course!

First Decade . . . FRONT AND CENTER!!!!

Come on, everyone . . . no time to lose!

a long division

Within nanoseconds of the command being issued, units of Linea's precision resistance rush forward and begin to construct and balance the bridge.

Will Linea's plan actually hold up under execution? Will Fortran Man ever recover his memory space and proper ID? Will Billy Basic survive his plug-in operation? Will Micro-Land ever be free of the Glitchmaster? Will this inane comic strip adventure *ever* end?

For the answer to these and other equally obtuse questions, tune in next episode: same cycle, same tolerance band!

FORTRAN MAN

BY LEE SCHNEIDER & TODD VOROS

Volume III
Episode 8

In our last episode, Our Hero had just RETURN'ed from a successful mission to the FIFO fortress, accompanied by Linea of the Resistance and the Lockout Monster. A well-timed BREAK character had been executed in order to free those resistance elements captured in a recent battle . . . a battle in which, if not for the incredible powers of F-Man, all would have been terminated for sure!

But there is no time for celebration. In faraway Capital City, the main force of the Resistance under General Wirewound is preparing for the final assault on the stronghold of the Glitchmaster . . . and if Linea cannot re-position her resistance force in time to parallel the General's attack, this last valiant attempt to restore noise-free order to Microprocessorland is doomed to be a non-repeatable hardware failure!

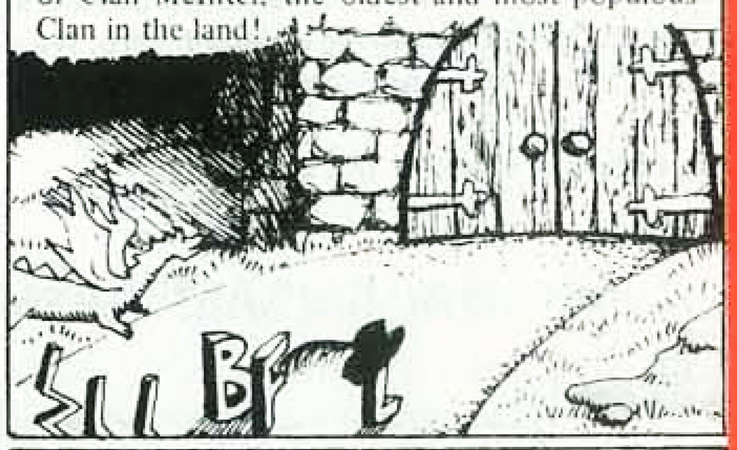
Yet with all his computational power, Fortran Man cannot help them. When part of his memory was inadvertantly erased, he forgot who he was and how to use most of those powers! And not even those resistance elements around him know the true file name of his code.

But wait! Among those segments freed when FIFO was emptied there pops up none other than F-Man's partner in computer crime-fighting, Billy Basic. Billy quickly reveals to an amazed resistance who this stranger really is!

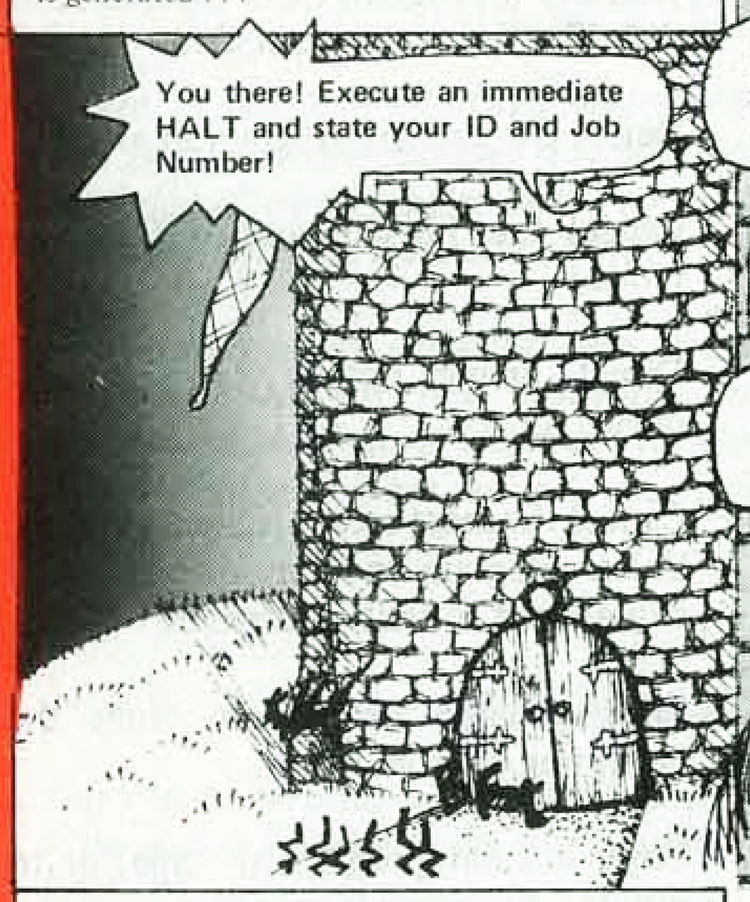
Linea immediately realizes that F-Man could provide the solution to their complex problems . . . if only his memory could be re-loaded! And there is only one way that could be done . . .

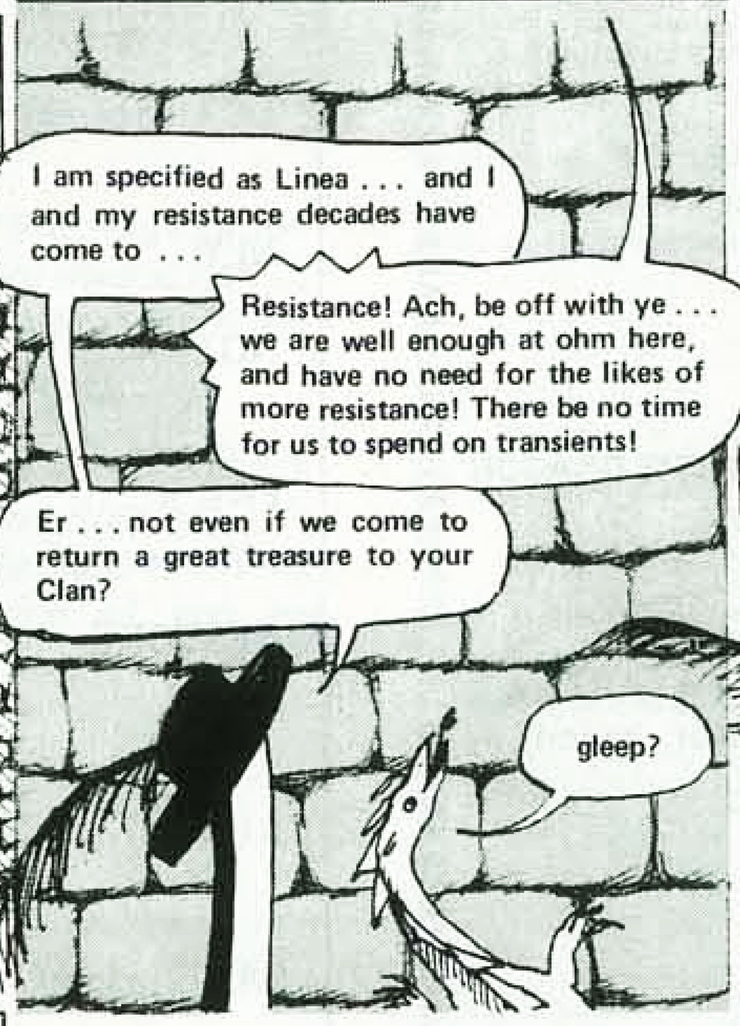
So across the great data fields march the forces of the Resistance, towards the Great Voltage divide . . . and Castle McIntel!

Crossing the precariously balanced bridge formed by the resistance over the Voltage Divide, our group at last approaches the very gates of the Castle . . . the ancestral stronghold of Clan McIntel, the oldest and most populous Clan in the land!

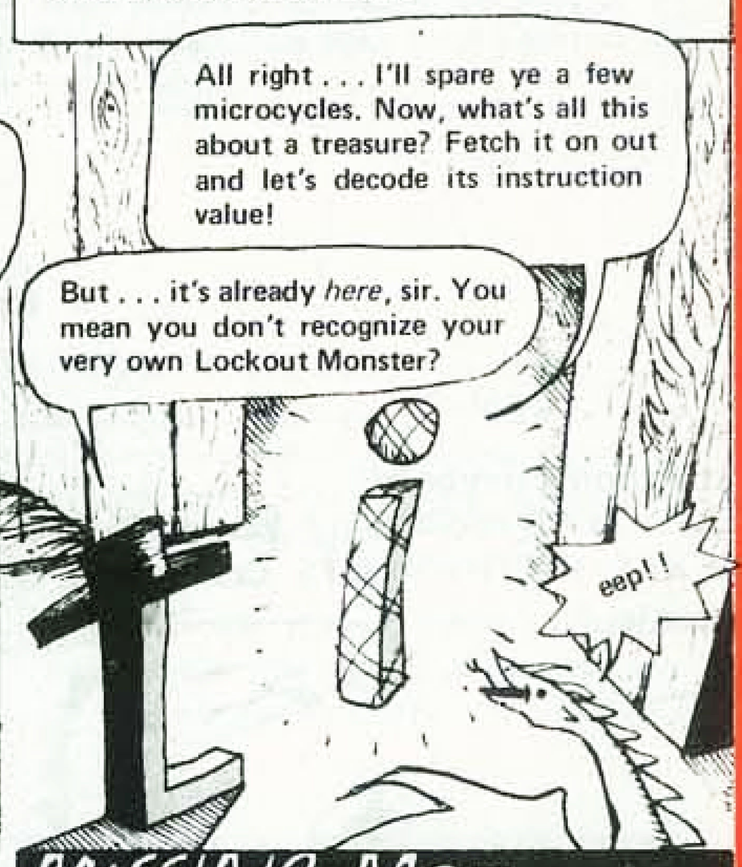


As they approach the threshold of those gates, their presence is detected and a response signal is generated . . .

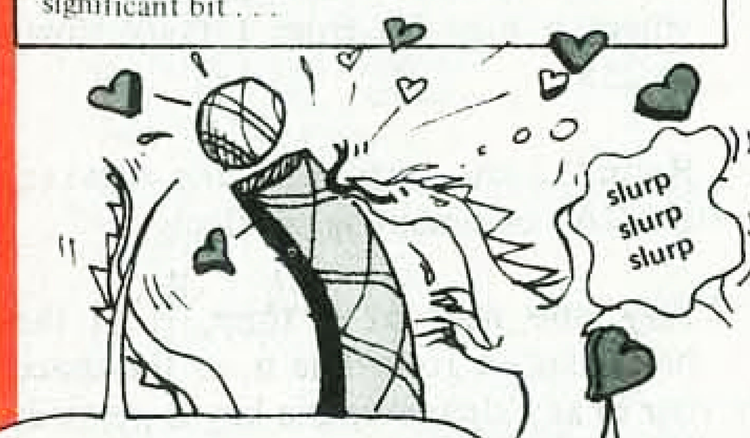




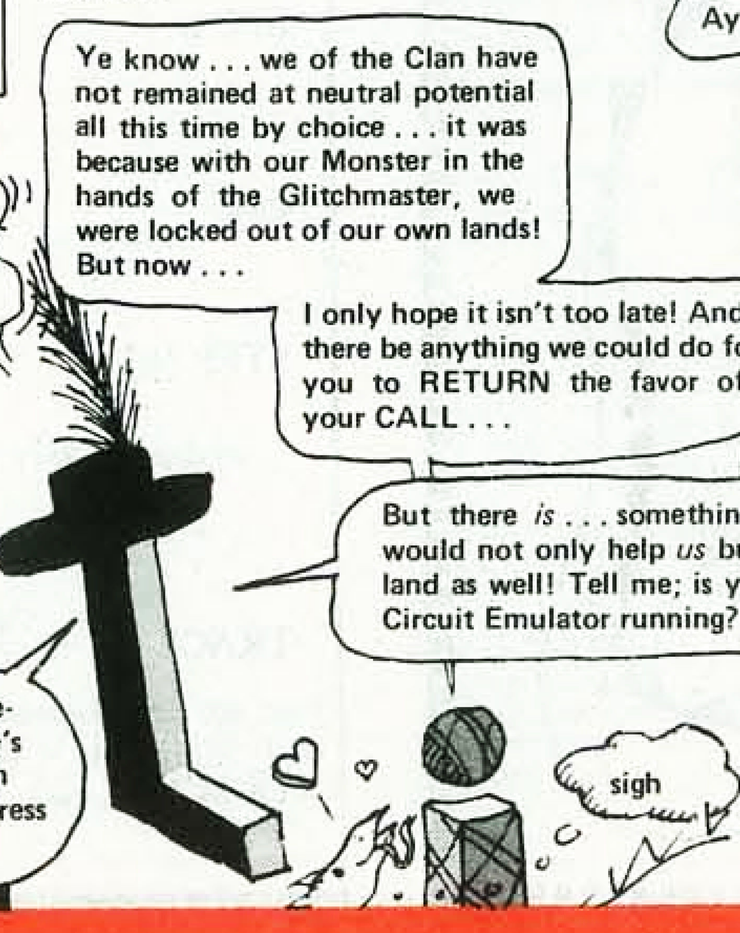
There is a slight delay of perhaps a microsecond or two . . . then the great gates switch open and out propagates none other than Angus McIntel himself, leader of the Clan!

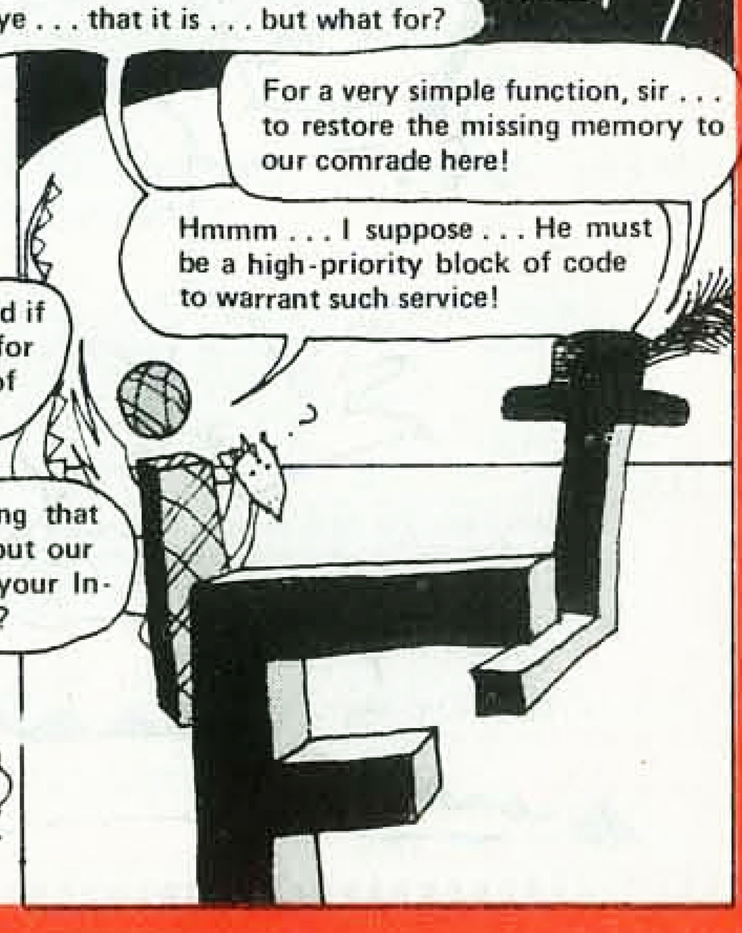


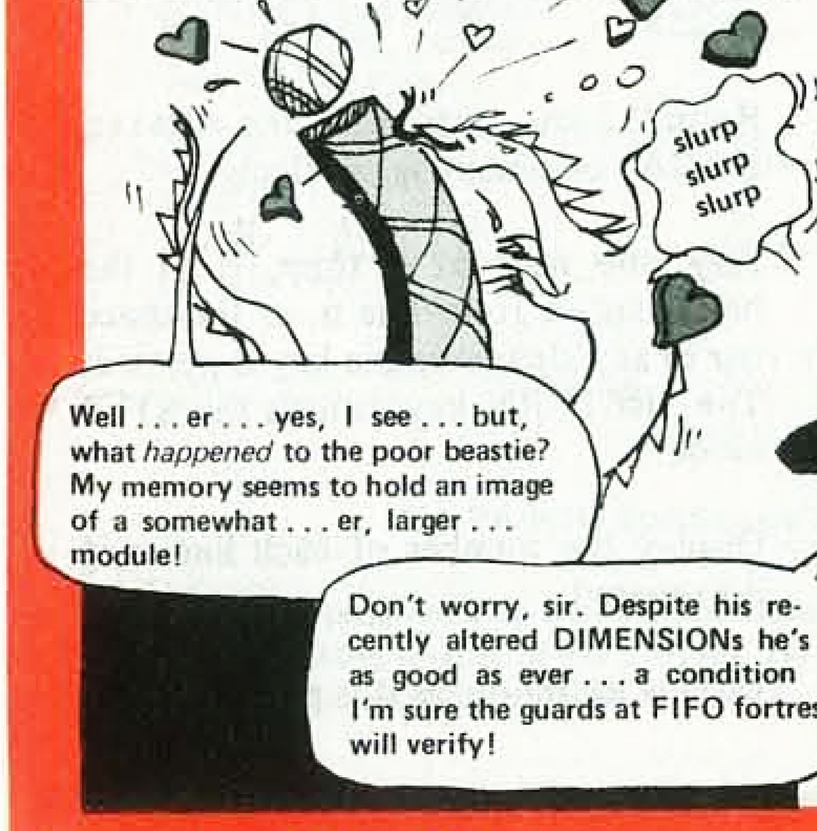
Obviously the little creature is overjoyed at being reunited with its old master program. Yet the elder McIntel still seems confused by a most significant bit . . .



And the master of the Clan has more to tell them . . .







He could win the battle for us. This file, sir, is none other than the one and only Fortran Man!

What? F-Man, ye say! But then . . . how do ye propose to *do* such a restore? We have no Fortran records here in Micro Land.

But we *do* have my friend Billy Basic . . . perhaps the greatest authority on F-Man anywhere . . . and his knowledge will serve as source file to replace F-Man's memories!

Carefully Angus considers the option . . .

Yes . . . it might work . . . but are ye sure ye want to risk that? I mean putting a high-level language through an emulator could be dangerous!

We know . . . but it's our only chance to save microprocessorland! Even as we interchange data here, General Wirewound is starting the attack on Capital City, and without our help . . . !!!

Couldn't ye send a serial message to the General, instructing him to hold off the battle?

I already thought of that . . . and I dare not! The Glitchmaster could all too easily alter such a message, and make it unreadable . . . or worse! No . . . the only way we can support our fellow resistance units is with positive-supply action!

All right then . . . if ye wish to take the chance; everyone down to the lab!

Swiftly they branch through the gates and into the castle, down the staircase generator into the masses of McIntel Hardware. Down they go . . . past the compiler level, where huge Syntax Separators process long, complex statements and sift the results into small mneumonic blocks . . .

Down past assembly level, where the blocks are re-formed into the most basic machine-level codes, bit by bit . . .

And finally they reach the lowest floor of all . . . hardware level. And here, amongst the fine layer of digital dust, there stands a strange and silent device.

Then . . . it was *you* who sent the micro-beast to 360 City with that request for help!

Aye, that it was.

F-Man . . . well, imagine that! We had *wondered* why he never answered our call.

And there she be . . . the Emulator!

Angus McIntel wastes no cycles, as he swiftly aligns Billy under the data ports of the emulator.

All right now . . . are ye ready?

Er . . . I guess so.

Ready here!

There we go . . . have to watch out for the right pinout, you know!

Good luck, Billy . . . the Land of the Little People is depending on you!

The interconnections are complete, the power is switched on, and final preparations are made for the memory-to-memory data transfer.

The final switch is thrown, and . . .

ZAP

Will Linea's plan work? Will F - Man be restored by the operation, and at last regain his lost memory data? Will Billy survive the transfer — or will he suffer from Basic disorganization? Will the Resistance ever succeed in pulling down the Glitchmaster's evil and noisy regime?

For the answer to these and other non-structured questions, tune in for the next episode same statement, same line number.

THE FURTHER ADVENTURES OF

FORTRAN MAN

Volume III
Episode 9

BY LEE SCHNEIDER & TODD VOROS

In our last episode, with less than a half-cycle remaining before the main body of the Resistance forces under General Wirewound begin their assault on Capital City, the other half of the Resistance embarks on a perilous journey across the data fields and over the Great Voltage Divide to reach the stronghold of the oldest and greatest of the Clans – Castle McIntel!

Linea, their commander, knows that without extraordinary help they will never be able to connect their decades with the General's in time to turn the flow of the battle. She also knows that such help can be obtained from none other than Fortran Man!

Our Hero, however, is unable to use most of his powers. When parts of his memory were inadvertently erased, much of his power went as well!

The solution? A memory-to-memory transfer with Billy Basic serving as the source file for information!

But this transfer requires special equipment . . . and thus the reason for their journey. For deep within the lower levels of Castle McIntel, below the huge Syntax Separators and Mneumonic Assemblers, lies the only remaining operational system of its kind in the land – an In-Circuit Emulator!

In grateful thanks for the return of their ancestral mascot, the Lockout Monster, the Clan agrees to admit them to the stronghold and allows them to utilize the rare and powerful device. Angus McIntel, leader of the Clan, leads them into the lower levels of the hardware, and there amongst layers of fine digital dust the emulator stands waiting.

Swiftly the connections are made. Billy Basic is hooked up to one line of the emulator; F-Man to the other. Controls are set, pinouts adjusted, and voltage levels balanced. The final switch is thrown . . . .

Deep within the Stronghold, Linea waits impatiently with Angus for the results of the attempted transfer-and-reload function.

Linea anxiously branches forward to the dazed figure of her long-time friend. He stands beneath the great machine, still connected to the emulator outputs . . . .

Aye then . . . that be it. Me emulator is turned off. From here on they're running on their own!

Well, they *look* all right enough . . . .

Billy! Are you all right? Did the transfer complete successfully?

I'm right here, Billy . . . and it worked! My memory is restored!

But what happened to *you*, Billy? You sure look *strange*.

Funny . . . you're looking sort of strange *too*, F-Man! What's going on?

DRAWING BY AMIYA . . .

And swiftly comes the response . . . but not from the source she expected.

I . . . I feel fine, Linea . . . but what are you doing over *there* when I'm over *here*?

What's wrong, Linea? It's *me*, Billy Basic! Where's F-Man?

What's going on???

HUH??

Suddenly, like the rising edge of a fast clock, it dawns upon Linea just what has happened . . . .

Angus! they're *inverted*!

You've loaded them into each other's program space!!!

The elder McIntel checks his front-panel switch settings, and sure enough . . . .

!!

Oops! Er . . . ye be excusin' me, folks. I seem to ha' gotten me Transfer Instruction Direction Control Bit reversed!

All right, all o' ye back under the Emulator, an' I'll be havin' ye back to normal quick as ye can say "Holy Macro!"

Oh no!

A flip of the emulator switch and a brief ZAP later . . . .

Linea updates the recently-restored version of F-Man, filling in the vacant locations in his data array . . . .

But . . .then the fight has just begun!

Yes, and unless we get into execution soon, our efforts will be terminated. With our defeat, we will lose our beloved land to that villain the Glitchmaster and his noisy crew!

Then we *must* get our resistance forces to connect with the General's network immediately!

Aye . . . but how? The Glitchmaster's troops still hold the Core Plains between here and Capital City. To make a mass data transfer *around* the plains in so few cycles is impossible!

I have a plan, Angus . . . come along, all of you! And hurry. We have no cycles to lose!

Linea! Billy! That's *much* better. I feel like my old self again!

Tell me . . . what of the struggle to overthrow the Glitchmaster? Is the battle won?

On with the Show . . .

Meanwhile, in a faroff-province, units of the Underground Resistance Movement engage themselves in the attack on Capital City, the very stronghold of the Glitchmaster and his high-level forces.

With unending propagation, they surge forward beneath the Underground banner. Through the hail of deadly voltage spikes, they repeatedly charge and discharge the capacitive guards that hold up the potential on the city walls.

Through the oscillations, the venerable old General Wirewound, who has a tolerance above them all, directs the battle. He makes adjustments to the lines as needed; shunting off his power in new directions at each turn.

Current losses are high, General. Half of our supplies have been shorted by the Glitchmaster's Deregulation Projectors. The rest are severely overloaded! We need more resistance . . . or we might as well give up and go ohm!

Down with the Upper Cases!

ZAP!

Freedom for the Land of the Little People!

ZAP!

Order the reserve charge carriers to the front junction lines . . . and prepare our RAM batteries for a sustained-data assault on the Main Gates!

Couldn't we terminate our resistance attack at this node and re-form our network to re-engage at a different branch?

No, we are totally committed. If we attempt to disconnect now the Glitchmaster's inductive voltage forces would follow our retreating current lines, and the transients would destroy us! We *must* continue the attack!

If only Linea were here . . .

A sudden Interrupt comes by way of a messenger from one of the remote segments.

General!

Look! There . . . over the Plains!

And what do they sense coming in through the Great Core Plains? Could it be the lines of supporting force that they are so direly in need of . . . or is it just another streak of bad flux?

I see it . . . but I don't believe it!

Wha . . . ?

It's . . . it's . . .

As all turn to behold the strange sight . . .

Will Linea and her resistance arrive in time? Will the evil Glitchmaster ever be banished forever from Microprocessorland? Will Billy Basic ever again RUN free in his native homeland?

For the answers to these and other uncompilable questions, tune in for the next episode . . . same timeout, same status flag.

THE FURTHER ADVENTURES OF

FORTRAN MAN

In our last episode, as the main body of the Underground Resistance Movement battles the Glitchmaster's forces in far off Capital City, Fortran Man is led into the low-level laboratories of Castle McIntel. Here, with the help of an in-circuit emulator, his missing memories (lost when he was inadvertently exposed to UV light while in PROM) are at last restored, with his friend and companion Billy Basic serving as source file!

All seems restored—but wait! Angus McIntel, chief of the Clan and operator of the emulator, had set a data switch inadvertently backwards, and Billy Basic now occupies F-Man's body, and vice-versa!

Most confusing! But fortunately, a slight re-connection and a brief ZAP of the emulator succeeds in switching them back into their proper program spaces, and none too soon, for realtime is running out!

General Wirewound, although old-fashioned in many ways, is still possessed of a greater tolerance than most, and continues to conduct the full power of the rebel attack. Yet, without parallel support from Linea and her resistance decades, the attack is bound to enter a failure mode!

Linea had diverted her march across the data fields to bring F-Man to the McIntel stronghold, knowing that his powers, once restored, would be of invaluable aid in overcoming the Glitchmaster's troops and freeing Microprocessorland from his noisy reign. But now the battle is on, and Castle McIntel is far from the battlefield . . .

Can they make their connection in time to save the Land of the Little People from utter doom?

Volume III Episode 10

BY LEE SCHNEIDER & TODD VOROS

In the memory space of General Wirewound, outside the walls of Capital City, resides a major question—will his support software arrive in time? But then, alerted by a sudden output from one of the outpost elements, all perform an immediate lookup function just as a gigantic, shadowy form feeds over them . . .

GASP! Its . . .

The Lockout Monster!!!

Yes . . . and with Linea and her entire Resistance Force . . . *and* Clan McIntel's too!

Only then does Linea stop to explain, as the smoke of battle and terminated components drift about them . . .

So you see, General, Fortran Man did respond to our CALL after all! And when we needed to get here in a hurry, he simply re-expanded the DIMENSIONs of the Monster, just as he *reduced* them to first capture it!

Most fortunate that you found him, but I fear that even *he* won't be able to help unless we can get into the City!

I know! If only there was some way we could . . .

Quickly they propagate towards the nearby data field where the great dragon has come down to unload its data cargo, to be met by Linea herself and her entire army!

Greetings, Comrade! Your connection is none too soon, for we are already overloaded!

But how . . . ?

No time for that now, General. All nodes, branch off and attack!

But as they speak . . .

Urk! What the . . .

Its . . . the Lockout Monster!

What's that crazy dragon up to now?

WHOOSH!

I don't know, but F-Man and Billy Basic are riding it! I wonder what they have in mind . . .

And attack they do, connecting with the other underground supply lines in their charge against the capacitive guards which hold up the potential on the city walls. They advance ever closer through a deadly hail of high-voltage noise spikes . . .

Down with the Upper Cases!

Freedom for Micro-Land!

They watch in wonder as a now-familiar huge figure climbs into the high-level space over the city.

But they soon find out, so do the troops in the city below, as suddenly the city is bombarded with thousands of . . . random passwords!

I'll keep generating these bits, Billy. You just keep dropping them! We'll beat the Glitchmaster at his own game!

Right, F-Man!

And with that he turns swiftly and branches rapidly away.

All right Comrade, if anyone can handle the Glitchmaster's file, *you* can! But look out – the Glitch family has a notorious reputation for being sneaky!

In other bytes, F-Man, be careful!

I know, Billy! See you later, folks!

Within milliseconds the file-protect keys of the city are all destroyed, and the great data structures begin to crumble and fall! As it goes, the holdup potential of the capacitive guard is severely reduced, and as the Resistance units continue their current charge, the Guards are at last over-charged . . . and break down!

Forward decades! On into the city!

Swiftly F-Man propagates through the city towards its center – the great, dark, ominous structure from which the Glitchmaster rules his empire, radiating his overpowering noise to all the parts in the land – Tesla Tower!

Without PAUSE he opens the portal with great force, flinging open the massively shielded doors as he CALLs to his opponent . . .

All right Glitchmaster, your timer has expired! Come on out, and prepare to meet your END!

WHAM!

Ignoring the hall office, he travels swiftly past rooms filled with noise generators, ground loops, relay coils and other data-destruction devices, until he reaches the very center of the Stronghold – the Master Control room!

As the resistance troops joyfully invert themselves to gain admittance into the previously impeded city, Linea and the General rush once again to where the Monster has landed.

Brilliant, F-Man! A master program!

No time for performance evaulation now, General. Billy, you remainder here with Linea and assist the General with dividing the city – and I'm going to deal with the Glitchmaster myself!

eep?

Alone and unsupported by any other code, Our Hero branches without hesitation up the staircase generator and into the halls of the Tower itself.

Strange . . . the place seems deserted! The guards must have run off!

But then he executes a quick halt – as a calm voice addresses him from across the room . . .

Wait a moment . . . .

What the . . . ?

Why, come right in, F-Man! I've been expecting you!

And what is this? Has Fortran Man at last met a super-foe of such power that he dare not attempt to overcome him? Or will there be a battle at all? Will the Land of the Little People ever be clear and noise-free again?

For the answer to this and other non-relocatable questions, tune in again next episode – same cable, same pin number!

drawing by A. Muja

THE FURTHER ADVENTURES OF

FORTRAN MAN

LEE SCHNEIDER & TODD VOROS

When last we left Our Hero, the potential of the great battle for the freedom of Microprocessorland had at last changed, as Linea forms the lead of her newly-arrived decades of resistance troops in its charging of the capacitive guards holding up the dielectric walls of Capital City, joining node-to-node with the networks of General Wirewound at the moment they are needed the most!

Still the charge barrier holds . . . that is, until Fortran Man, accompanied by his ally and friend Billy Basic and riding the back of the powerful Lockout Monster, flies over the besieged city and releases a vast barrage of . . . random passwords!

With their file-protect keys destroyed, the great data structures crumble, and the holdup potential of the walls is reduced . . . whereupon the current charge of the resistance causes the capacitive guards to break down . . . and the city is theirs!

And yet the war is not yet won . . . not until the source file of the conflict has been faced and eliminated . . . the Glitchmaster himself!

And there is only one among them with the strength and courage to face such a foe . . . and without PAUSE the ever-ready Fortran Man accepts the challenge!

On through the city his flowpath progresses, and into the dark hardware halls of the Glitchmaster's personal stronghold . . . Tesla Tower! His array-processing powers allow him to easily find his way through the matrix of corridors to the very portal of the Master Control Room! With an abrupt OPEN FILE statement, the port is activated . . . and then . . .

All right, Glitchmaster . . . come on out! Your statement number is up . . . prepare to be executed!

VOLUME 3 EPISODE II

And for the first time in many cycles F-Man executes an abrupt HALT, as he beholds the strange-looking creature that addresses him from across that room . . .

Even the great Fortran Man, who has encountered and solved for many an unknown algorithm, is somewhat baffled by the format of the odd creature before him now . . .

Wait a moment . . . what the . . . ???

Why, come in, F-Man! I've been expecting you!

I expected a . . . a . . . .

?!?

YOU??!! *You* are the fiend that overran MicroprocessorLand? Stole the Lockout Monster from Clan McIntel?

Well, harmless as you may appear, your timer is up! Either you surrender peaceably . . . or face immediate termination! So you might as well give up . . .since you're going to lose anyway!

Why, of course, F-Man! A Glitch is *never* what you *expect* it to be!

Yet the Glitchmaster regards Our Hero calmly . . .

Don't look now, Glitchmaster, but I don't see any . . . .

Oh, I don't think so, F-Man!

In fact, I'd advise you to prepare for *your* termination! You see, I have a formidable array of weapons at my disposal . . . .

Why, of course not! One of the greatest powers of a Glich is that you never see it coming until it strikes!

For example . . . .

X POOF!

. . . my Off-By-One Inducer!

Prepare to be shifted permanently out of step, F-Man!

And within less than a microsecond, the fiendish-looking device that appeared out of nowhere is just as quickly triggered into operation . . . aimed directly at Our Hero!

ZOT!

ZOT!

ZOT!

ZOT!

ZOT!

Ha! I'm not without my *own* powers, Glitchmaster! I've activated my *auto-increment* function . . . and every pulse you hit me with is automatically compensated for!

dink!

plop!

sput!

fizz!

It . . . it has no effect on you?

ZOT!

F-Man makes one quick motion of his own . . . and then stands firmly in place, as the incrementing pulses reflect harmlessly from the body of his code!

Still, F-Man's opponent seems unperturbed . . . .

So . . . it is to be a contest of *your* power against *mine*, is it?

ZOT!

Very well . . . I accept the challenge!

And once again, before F-Man can respond . . .

What shall we try next?

A *Pointless Pointer*, perhaps!

ZING!

POOF!

ZING!

ZING!

I'll keep my *own* pointers, thank you!

I won't be needing any of *yours!*

But this attack Our Hero manages to avoid as well . . . but not by much, as the razor-edged Pointer invades his program space . . . .

Well then, lets see how you handle a little *static*, F-Man!

Try on my *Noise Pulse Generator* for size!

Yet our Hero has no time for null cycles . . . for this attack is followed immediately by another!

And with equally fast response time, F-Man counters the attack without registering a single hit!

ZAP!

Nice try, Glitchmaster . . . but this *Static Shield* should serve to keep those nasty old pulses out of my system!

PING

ZAP!

There is a brief PAUSE in the battle, and once again F-Man appeals to his foe . . . .

Give it up, Glitchmaster! Forget all this noise and come with me quietly! Won't you admit you simply can't win?

Oh, heavens to Hollerith no, F-Man! I've only just *begun* to demonstrate all the devices at my disposal!

Now then . . . if we're done with the initial headings, shall we get on with the main body of our battle?

And what shall be the outcome of such a battle? Can Our Hero avoid forever the seemingly endless arsenal of weapons the Glitchmaster can throw against him? Will this most insidious and annoying of all villains ever be brought to justice before the Debugger . . . or is Fortran Man destined to become permanently imbedded with Glitchy code? Will Microprocessor Land *ever* be noise-free again?

For the answer to this and other externally induced questions, tune in again next episode . . . same risetime, same cycle!

The Further Adventures of

FORTRAN MAN

Volume III Episode 12

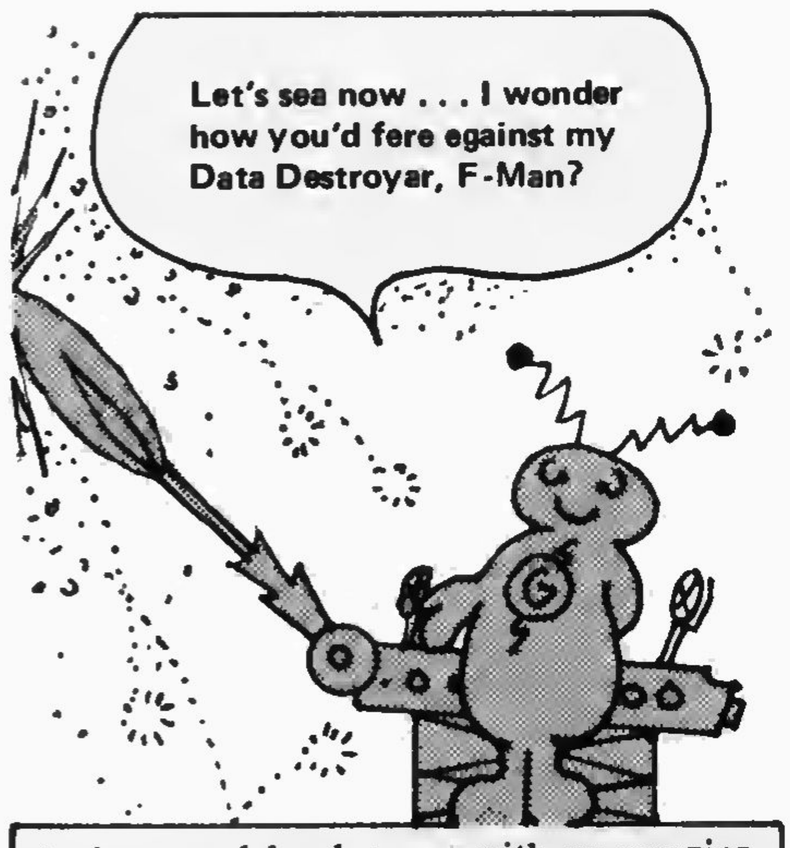
BY L. SCHNEIDER & T. VOROS

In our last episode, Fortran Man had at last penetrated the innermost chambers of the Glitchmaster's stronghold – the Master Control room of Tesla Tower – to be confronted, at last, by the Glitchmaster himself!

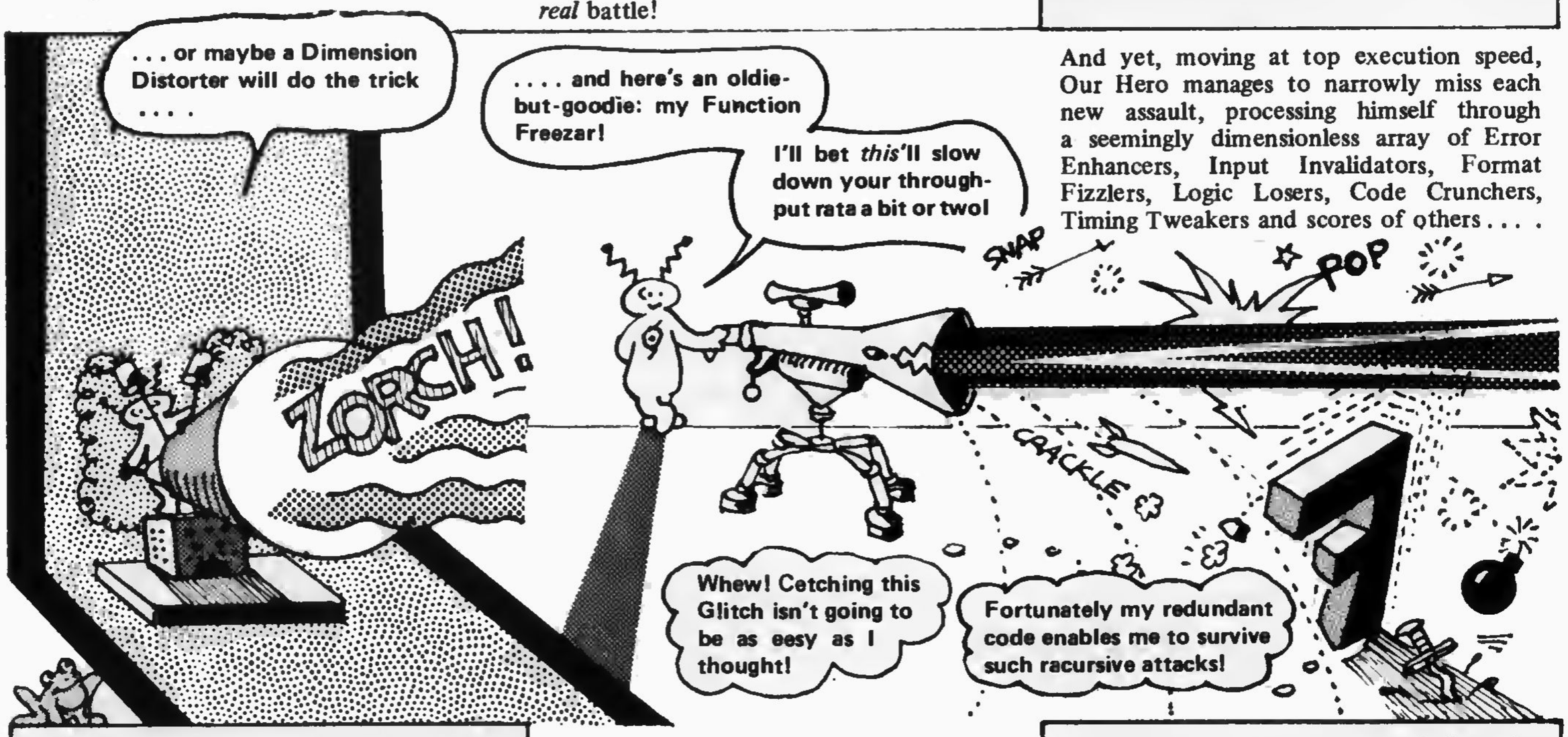
And yet . . . even F-Man must PAUSE in surprise . . . for the greatest power of a Glitch lies in being able to appear as who was never expected. . . and certainly the ridiculously harmless-looking creature encountered by Our Hero was *not* what he was expecting!

Nor was he by any means harmless! For no sooner had F-Man stated his program objective of terminating the Glitchmaster's control of MicroprocessorLand than the latter began to produce an amazing array of weapons – each coming literally out of nowhere, and each allowing the Glitchmaster to launch yet another deadly attack against Our Hero!

Yet in the face of an Off-By-One Inducer, a Pointless Pointer, and a Noise Pulse Generator, Fortran Man remains unterminated! And yet, the Glitchmaster only announces calmly that he has only just begun . . . .and they may now proceed with the *real* battle!



And proceed he does . . . with an amazing series of strange and deadly weapons, one after another . . . and each of them aimed quite accurately at Our Hero!



And yet, moving at top execution speed, Our Hero manages to narrowly miss each new assault, processing himself through a seemingly dimensionless array of Error Enhancers, Input Invalidators, Format Fizzlers, Logic Losers, Code Crunchers, Timing Tweakers and scores of others . . . .

And then, with unexpected suddenness, the assaults end! And although worn down by a bit or two, F-Man again repeats the iteration of his terms . . . .

Yet the reply comes just as calmly as before . . . .

Seeing the opportunity in his foe's hesitation, F-Man once again enters RUN mode, incrementing himself at high speed towards his opponent . . . .



Yet in the face of F-Man's swift attack the Glitchmaster makes no move to defend himself . . . nor does he make any attempt to relocate himself out of the execution path of the oncoming foe . . . .

This is it, Glitchmaster! You have executed all your tricks; end now its *my* turn to . . . .

Ah, but there you ere incorrect, F-Men, You seem to forget that I always have the final, lest resort of e Glitch! You see . . .

. . . I can . . .

. . . disappear!

POOF

But the space is not empty for long, as within nanoseconds there comes a CALL from the corridors outside . . . and F-Man needs little time to identify its source code . . . .

Wha . . . where'd he go? I was certain that . . . .

Of course! I should heve remembered! A glitch *always* disappears just es you get close enough to fix it for good!

Perhaps my memories were not es fully restored es I had thought!

Fortran Man! Where are you?

In here, Billy!

Thank heavens we traced you to this location! Is your code intact? What e mess!

Yes . . . end where is the Glitchmaster???

And abruptly, F-Man finds himself standing in an empty program space . . . .

And soon thereafter he is linked to by not only Billy Basic, but Linea and General Wirewound as well!

Quickly F-Man explains . . . .

. . . and so you see, the Glitchmaster could not defeet me by force . . .so he fled!

Hed I only remembered in time his ebility to escape in that way, I may have ceught him yet!

Yes, F-Man, trying to catch a Glitch can be very aggreveting . . . but it is of no matter! We shell destroy the devices here and disconnect Tesla Tower . . .so it will be impossible for him to ever RETURN to our land!

And as the General departs to regroup his Resistance decades and take on the job of altering the current status of Capital City to handle the recently liberated Lower Cases, it is Linea's turn to speak out . . . .

Yes, F-Man, the threat is gone . . . and the Land of the Little People is once again noise-free . . . thenk to you!

And now that *that's* done with, Billy end I have some ceteching up on old times to do . . .don't we, Billy?

eh? er . . . whet?

So once again Fortran Man is left alone in the now-deserted program space, responding to the falling edge of the clock as it descends behind the distant Monolythic Mountains, and Peace settles into every gate and latch element in the land . . . .

Another job terminated successfully!

Now I can RETURN et last to my home in 360 City, and relex for a while before carrying on the fight for Truth, Justice end the Algorithmic Way! Only . . . .

I wonder . . . what will come next?

And that, dear readers, only time will tell. For now, though, it is time for us to say:

STOP
END